QUARTERLY REPORT ON INFLATION

December 2000

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„The Quarterly Report on Inflation" is published by the National Bank of Hungary with the aim of providing the general public with regular information on the current and expected state of inflation as well as the Bank's interpretation of macroeconomic developments determining inflation. Wider access to information on monetary policy objectives is expected to lead to a better understanding of the Bank's policy responses.

The goal of this publication is to describe and interpret the developments of the preceding quarter.[1]

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[1] The previous issues of the "Quaterly Report on Inflation" are available on the home page of the National Bank of Hungary.

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Summary

The National Bank of Hungary's policy target is to achieve price stability and a sustainable decline in inflation. Predictability and moderate interest rates, concomitant with a low inflation environment, are both factors which facilitate long-term, rapid economic growth. Achievement of the inflation target is assisted by an exchange rate regime based on a pre-announced crawling peg. This system promotes a nominal path which poses no risk to external balance, while ensuring convergence of the domestic inflation rate towards the level of Hungary's main trading partners.

The third quarter of 2000 continued to be dominated by adverse inflationary shocks, with inertial effects also playing an increasing role. The main factor to blame for the upsurge in inflation is the sharp rise in (non-processed) food prices in the wake of regional supply shocks at the end of last summer. Another reason for the adverse developments is that the rapid rise in imported energy prices, which started one and a half years ago, has been incorporated into consumer prices after the appropriate lags. As a result of these effects, the twelve-month *consumer price index* (CPI) returned to the double-digit range once again in September, and rose to 10.4% in October. Although the increase in the CPI was primarily caused by one-off factors that are exogenous to monetary policy, the rise in core inflation seen since July also reflected an increase in the trend of inflation. The core CPI calculated by the National Bank of Hungary removes the effects on inflation of seasonal foodstuffs, petrol and certain energy and regulated prices, in an effort to monitor changes in the components that have a long-term impact on inflation. Following the 7% low measured in June, this core index rose to 9.6% in October.

In view of the fact that international economic forecasts do not predict that inflationary shocks (such as energy and food price shocks and the weakness of the euro) on the scale experienced during 2000 will occur again next year, the current rise in inflation will probably remain a temporary phenomenon.

The third-quarter rise in imported inflation also contributed to the strengthening of unfavourable inflationary pressures, as reflected in a 15% rise in the import unit value index. Again, this was partly due to energy price rises, but there was also a considerable simultaneous increase in the inflationary pressure experienced by Hungary's main trading partners. The rise in inflation, however, was lower than that seen in Hungary, which pushed up the differential relative to the euro area to 7.8 percentage points. This unwelcome development was primarily due to the fact that the impact of an increase in food prices in the euro-area countries is dampened by regulation, but the higher weight of energy in the Hungarian consumer basket was another factor. In respect of commodities that are directly disciplined by the exchange rate path (such as industrial goods), the inflation differential remained at the level seen in the previous quarter.

In contrast to the previous year, regulated prices changes appeared to assist disinflation. In the category of services with regulated prices, accounting for 9% of the consumer basket, prices rose at a rate of 7.2% in October – a much slower pace than market services (11.9%). At the same time, economic policy considerably dampened the impact of imported energy prices on domestic consumer prices, by allowing only of small portion of input cost increases in pipeline gas and public transport prices to be passed on to households. This stifling of the price level together with the indirect

cost-push of the oil price explosion, which will emerge after a long lag, may exert significant inflationary pressure in the future.

Inertial effects are exerting increasingly greater influence over the course of inflation. This is reflected in private sector wage growth. The decline in inflation is being hampered by the fact that wage growth did not slow relative to the previous period. This effect also fed through to services prices. In addition, input price increases take a shorter time to feed through to services prices than rises in industrial goods prices, as the latter enjoy faster productivity growth and are directly disciplined by the exchange rate. As price increases were not hampered on the demand side either, the rise in wages and other costs were incorporated into services price growth, which was close to 12% in October. The difference between market services and industrial goods prices rose to 7.2%.

GDP growth continued to decline in 2000 Q3, amounting to 4.6% according to preliminary figures. The rate of demand growth was primarily determined by a decline in net export growth. In addition to nearly flat export growth (at 20.6% of GDP), imports rose at a 4-percentage-point higher rate than in the previous quarter, (at 16.4% and 20.2% of GDP in 2000 Q2 and Q3, respectively). Based on the currently available data it remains unclear whether the higher import requirement is the result of domestic demand or export growth. This is because it was predominantly intermediate goods imports that expanded, which are used as input in both areas. Similarly to the second quarter, final consumption in the third quarter rose by 3.3%, while investment growth dropped to 2.2%. Rise in inventories contributed 1.7 percentage points to GDP growth, inclusive of measurement errors.

Buoyant external activity continued during the third quarter. Confidence indices and forward-looking indicators equally suggest that the peak in aggregate demand growth experienced by Hungary's main trading partners is likely to have occurred during this quarter. Exports to the CEFTA countries rose by 37%, outstripping export growth both to the developed countries (31%) and the EU countries (29%). Export rates to the CIS countries remained flat. Due to a 3.1% deterioration in the terms of trade caused by the increase in world prices for energy and commodities, the balance of trade calculated in euro reflected a worse situation than the volume data. The increase in the seasonally adjusted deficit on the customs-statistics-based balance of trade continued during the third quarter.

Of the components of domestic demand, consumer spending continued to expand at a slower pace than last year (3.6%), though still above income growth (operational income growth was 2.3% in the year to the third quarter). The decline in consumer spending growth is likely to have been caused by slower growth in pecuniary social benefits, as net earnings rose at an approximately 4% rate. Credit-financed consumer spending remained flat during the quarter. The narrowing gap between income and consumption growth rates led to a rise in the gross saving rate to 10.7%, up 0.8 percentage points on the previous quarter. Furthermore, the composition of gross saving also changed. The inflation-adjusted financial saving rate of 4.9% exceeded both the rate for a year earlier (3.3%) and for the previous quarter (3.1%). By contrast, the 6.4% investment rate was 1.3 percentage points down on a year earlier, despite strong growth in building and property purchase loans. The unexpected upsurge in financial savings was primarily due to one-off wage outflows, as well as increased caution arising from the higher-than-expected inflation.

Whole-economy investment expanded by 2.2% relative to 1999 Q3, which fell short of both expectations and the rates for previous quarters. This slower investment growth could not be foreseen in either industrial output or capacity utilisation changes, with the only telltale sign perhaps being subdued growth in investment imports.

The SNA-based primary balance of the government improved by 1.0% of GDP relative to 1999 Q3; thus, the general government restricted demand to this extent. Although a considerable portion of this fiscal tightening will not last and stems from the changing seasonality of expenditures, fiscal policy is expected to remain tight for the year as a whole. This better-than-expected position is attributable to the effect of the automatic stabilizer, as stronger-than-expected growth and higher inflation tend to boost fiscal revenues, while expenditures are nominally fixed. In respect of pension expendi-

tures, accounting for nearly 70% of transfer payments, there will be a correction for the inflation-induced loss in value during the fourth quarter.

As reflected in weak investment activity, so far faster economic growth has not run into capacity shortages. Nevertheless, manufacturing capacity utilisation rose to over 81%, simultaneously with a rise to over 10% in the proportion of companies reporting capacity shortages relative to prospective orders. Potential labour use also increased. Employment growth to over 50%, induced by a 1.3% expansion in private-sector employment, and a parallel rise in total hours worked reflect steady, extensive growth in the use of labour. The drop in unemployment to 6%, in addition to the lowest rate of collective redundancies seen in the past few years and rising average hours worked, especially in manufacturing, warn of tightness in labour reserves. The tight labour market is accompanied by high nominal wage growth in the private sector. Although private-sector wage inflation tapered off somewhat in a quarter-on-quarter comparison, the 13.2% rate in the third quarter can be regarded as a sign of nominal accommodation to the higher-than-expected inflation path. The increased wage bill was covered by stronger manufacturing productivity and higher services price inflation. Although the 11.9% wage index in the public sector is somewhat above the announced rate, this is broadly due to fiscal institutions' wage rises funded from their own resources and to one-off extra sums in healthcare paid in July.

The demand structure in the third quarter was conducive to equilibrium, as robust export growth was accompanied by moderate domestic absorption. This, however, did not prove to be sufficient to offset the price losses triggered by persistently high levels of external energy and oil prices, boosting the country's financing requirement to 3.4% of GDP. At the same time, this rise in the financing requirement could only partly be attributed to losses caused by deterioration in the terms of trade. In 2000 Q3, nominal deterioration in the balance of trade was simultaneous with a capital outflow via current forint transfers. The higher net position was due to the higher private sector financing requirement as the public sector's need for funds declined during the quarter.

There was a significant change in the composition of the private sector's financing requirement relative to the previous year. Households' improved financing capacity, which was primarily due to temporary factors, was accompanied by a higher corporate borrowing requirement. Although business profitability continued to increase in an environment of robust economic growth, it fell short of the rate of GDP growth, and adverse price effects and foreign residents' profit repatriation worsened companies' financial position (as a proportion of fast-growing GDP).

These factors combined led to a deficit of EUR 126 million on the current account of the balance of payments. Despite further improvement in the balance of services, the deteriorating trend in the trade balance exerted downward pressure on the overall trend of real-economy transactions. The balance of transfer payments also registered a rise in net income outflows linked to non-debt investments.

The third-quarter deficit on the current account of the balance of payments was financed by waning non-debt-generating (EUR 92 million) net capital inflows, while financing by debt-type investments was characterised by net capital outflows. In respect of non-debt-generating items, net equity purchases within foreign direct investment and the acquisition of ownership stakes amounted to EUR 320 million, as a result of an inflow of EUR 519 million and an outflow of EUR 199 million. This greatly exceeded the deficit on current account in its own right. This, however, was offset by foreign direct investment by Hungarian resident companies, at nearly EUR 200 million, which can be traced back to one single exceptionally large transaction. Following a slowdown during the second quarter, the private sector began to step up its borrowing again during the third quarter. Credit institutions primarily used foreign-currency funds to increase financing loans to the corporate sector.

The strengthening of the inertial components of inflation and the development of labour-market bottlenecks, still accompanied by rapid growth and a favourable corporate sector position, called for the tightening of monetary conditions. Although the stronger real appreciation caused by rising inflation tightened monetary conditions in the third quarter, the drop in forward-looking real interest rates

was a major cause for concern. Therefore, the central bank made a proposal to the government to replace the exchange rate regime as a means of obtaining greater flexibility in dealing with the impact on inflation of external price shocks. In the absence of an agreement with the government on the timing of the change, the Bank was left no other means of responding to the visible rise in inflation than via interest rate policy. This is the background for the 100-basis-point rise in the benchmark rate on October 11th. In order to control sterilization costs, the central bank also modified its sterilization instruments as of October 24th , in respect of the conditions of the two-week deposit facility. In terms of the change, periodical availability was replaced by volume bidding as of October 31st. A volume tender means that the Bank invites bids for deposits up to a pre-set amount. Central bank clients can then make competitive bids, stating the rates of interest they are willing to accept, in view of the announced interest rate ceiling.

The 100-basis-point rise in the interest rate premium did not induce any interest-rate sensitive capital inflow before the end of October, as international capital markets were characterised by negative investment sentiment about riskier investments (such as those in emerging markets). This pushed up the required interest rate premium. External demand for forint investments and the interest rate premium on the forint was dampened by the fact that the same period also saw a temporary rise in euro yields. Speculative forint demand during the period under review was, in all likelihood, curbed by the August 31st session of the Central Bank Council, which made it clear to the markets that, contrary to previous expectations, there would be no cut in the rate of devaluation in the course of 2000. As, despite the higher interest rate premium, the speculative demand for forint investments remained subdued, the forint's exchange rate moved away from the strong edge of the band by an average of 30–40 basis points, which implies that the size and timing of the interest rate hike was justified.

The underlying factors in the significant rise in long-term market yields beginning from mid-August were the rise in inflation expectations and the increase in the risk premium caused by greater uncertainty. The September inflation figure and the central bank interest rate hike drew a strong reaction from the government securities market, with the rise in short-term yields approximating the rise in the central bank rate, and that in yields with the longest terms to maturity at roughly 60 basis points. From end-October, the sharp rise in forint yields induced capital inflow on the government securities market, which, however, was dampened by the weaker risk rating of emerging market investment. Following a temporary phase in the aftermath of the interest rate hike, there was a slight drop in long-term yields – especially those with maturities of up to 10 years – which reflects favourable changes in medium-to-long term inflation expectations during the period following the rise in the interest rate.

The rise in central bank and market rates fed through to commercial bank rates as early as October. Interest rate transmission was fastest and most efficient in respect of corporate rates, while the pass-through of the rise in market rates into household rates was smoothed by commercial banks over a long period of time.

The slowdown in the real growth of monetary aggregates continued in 2000 Q3. In contrast to the past two years, the asset structure of both the household and corporate sectors saw a shift towards medium-to-long-term time deposits. Households seemed to give preference to assets outside M4 (such as shares, life insurance reserves, pension-fund savings), which reduced real growth in the household components of monetary aggregates. By contrast, the weight of government securities and, to a smaller extent, that of time deposits began to increase within corporate sector assets, at the expense of liquid assets. Thus, real M3 and M4 growth outpaced that of the corporate component of M1.

The third quarter witnessed a small rise in the net financing requirement of non-financial companies. While the volume of borrowing did not change significantly, there was an increase in the stock of financial assets. However, in light of the much weaker-than-expected investment figures, this improvement fell short of the expected level. Thus, net positions suggest a drop in corporate-sector profitability and/or an upsurge in the level of inventories.

Main macroeconomic indicators

	1999				2000		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Growth rate (at constant prices) *Percentage changes on a year earlier*						
GDP*	3.4	3.8	4.5	5.7	6.6	5.8	4.6
Of which: domestic absorption	5.3	4.2	2.4	4.8	5.7	3.7	4.5
– final consumption	4.3	4.3	4.1	3.6	3.0	3.2	3.3
= household consumption	4.5	5.0	4.6	4.4	3.3	3.5	3.6
– investment	8.0	3.9	–1.4	7.4	12.7	4.8	7.5
= fixed investment	5.7	6.1	3.6	7.5	7.0	5.5	2.2
Exports (GDP)	9.5	9.8	13.6	18.9	21.5	20.9	20.6
Imports (GDP)	12.9	10.2	9.3	16.6	18.9	16.4	20.2
Real effective exchange rate index**							
On CPI basis	2.8	0.3	–3.5	–5.7	–3.1	–0.9	–1.2
On PPI basis	5.2	1.9	–2.5	–6.6	–6.1	–4.7	–5.5
On unit labour cost basis (on value-added basis)	6.4	5.0	4.7	3.2	4.3	4.6	3.7
On unit labour cost basis (on gross output basis)	8.5	6.5	7.3	6.5	10.1	11.7	11.5
Deficit	*As a percentage of GDP*						
General government deficit (cash flow basis))***	–9.5	–5.9	–4.4	–2.9	–4.5	–3.9	–2.4
General government primary balance***	–1.5	0.1	1.8	2.7	1.3	1.7	2.7
	EUR billions						
Current account balance	–0.5	–0.6	–0.1	–0.8	–0.4	–0.5	–0.1
Foreign direct investment (net)	0.3	0.3	0.3	0.7	0.2	0.7	0.4
Savings rate**** (%)	8.5	6.4	6.9	8.4	6.7	5.9	8.0
Unemployment rate + (%)	7.1	7.0	7.0	6.8	6.5	6.5	6.2
Wage inflation ++ (Same period a year earlier = 100 %)	15.3	16.3	14.5	14.6	11.6	13.4	12.8
Net average per capita income in real terms+++ (Same period a year earlier = 100 %)	5.0	5.0	3.6	3.8	2.1	3.2	2.7

* These entries are partially based on Bank estimates.
** Positive figures indicate real depreciation; nominal exchange rate indices are calculated with market exchange rates from 1995; deflators refer to the manufacturing industry
*** Estimated values, as there are no appropriate quarterly data for local governments.
**** Net financial saving of households as a percentage of total household income (***not*** *including the revaluation total due to exchange rate changes and other factors).*
+ Based on the labour-market survey of the Central Statistical Office according to ILO standards; number of unemployed as a percentage of the active population; seasonally adjusted data.
++ Wage inflation is calculated by the National Bank, see June Report. As there is no consistent methodology by which to compute the index for the period prior to 1999, there are no figures for the years previous to 1999.
+++ National Bank estimate of net earnings of employees in companies employing at least five persons and for the entire fiscal sector, taking into account the effect of income tax changes.

Main monetary indicators

	1998				1999				2000		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
	Percentage changes on a year earlier										
Inflation (CPI)**	16.4	14.2	12.5	10.3	9.3	9.1	10.9	11.2	9.6	9.1	10.3
Producer price index**	13.5	11.6	10.4	7.1	4.9	4.5	4.8	8.2	9.9	11.6	12.8
Devaluation rate of the forint's central parity	12.9	12.2	11.4	10.3	9.4	8.4	7.5	6.5	5.9	5.0	4.3
	*Real growth of monetary aggregates** Percentage changes on a year earlier*										
M0	1.7	3.3	3.7	5.8	8.5	7.9	3.9	11.5	6.2	5.1	6.0
M1	6.7	9.1	7.9	6.1	7.1	6.3	5.6	6.8	6.9	7.6	5.4
M3	2.3	4.0	4.6	4.4	8.0	7.1	5.0	4.3	5.0	4.2	3.0
M4	10.0	9.8	9.4	9.4	9.1	9.0	7.7	6.9	6.6	6.5	4.7
	*Real growth of the stock of lending by financial institutions** Percentage changes on a year earlier*										
Corporate sector, foreign + domestic	13.1	14.5	16.4	11.2	13.4	10.8	7.0	13.4	17.3	22.6	24.0
Corporate sector, domestic	14.5	15.5	15.6	9.9	11.0	7.2	3.5	11.3	15.7	20.7	23.3
Household	–11.4	–2.4	2.4	0.8	11.6	14.0	17.8	20.4	28.0	30.6	30.8
	*Interest rates (%)**										
Reverse repo/two-week deposit***	18.75	18.00	18.00	16.75	16.00	15.25	14.75	14.25	11.25	11.00	10.75
90-day Treasury bill	18.65	17.33	19.06	16.10	15.68	14.74	14.07	12.44	10.63	10.50	10.75
12-month Treasury bill	18.70	17.32	18.96	15.88	15.61	14.77	14.17	12.33	10.42	10.42	10.71
3-year Treasury bond	17.42	16.31	18.00	14.18	14.01	14.03	13.45	10.75	9.09	9.43	9.95
Budapest Stock Exchange (BUX)	8,656	7,806	4,571	6,308	5,490	6,486	6,747	8,819	10,000	8,318	8,270
Interest rate premium (bsp)****	364	363	674	533	531	551	551	426	309	227	208
	Conversion										
Conversion, EUR millions	2,253	850	–1996	–175	313	239	1,211	1,043	1,466	79	815
Banking sector net foreign borrowing,† EUR millions*	854	231	–617	–158	7	–173	151	312	707	8	464
Corporate sector net borrowing, †† EUR millions*	384	–24	209	579	109	753	390	316	–199	–271	–308

* Based on methodology considerations, the Bank has retroactively revised the monthly balance of payments accounts, as well as certain entries for foreign-related assets and liabilities published for 1995–1999.
** At the end of the period, in respect of government securities, reference yields of the State Debt Management Centre.
*** The maturity of the reverse deposit facility was reduced from one month to two weeks as of January 8, 1999.
**** Interest rate premium: excess yield on three-month T-bill investment over the devaluation rate and foreign interest rates. The current devaluation rate was modified upon official announcement of the change.
† Excluding privatisation revenues.
†† Including inter-company loans.

I. Inflation

In 2000 Q3, the inflationary pressure first observed in the second quarter continued. The twelve-month *consumer price index* (CPI) returned to the double-digit range in September, and reached 10.4% in October. The core inflation index calculated by the Central Statistical Office (CSO) stood at 8.7% in October, compared with the Bank's core measure of 9.6%. August 1999 was the last time that the latter index reached such heights. It is now clear that not only has the robust trend of disinflation in progress up to 2000 Q1 come to a halt, but prices are again rising at an accelerating pace, due to the inflationary shocks on the economy. In contrast to the previous favourable trend, *food prices* are no longer retarding the rise in the price level, but exerting upward pressure, pushing up the twelve-month index to 14.1% in October. Annual price inflation of *industrial goods*, disciplined by the exchange rate path, has remained a little under 5% nearly uninterruptedly since April, and the annual index was at 4.7% in October. By contrast, the market services price index, which is primarily sensitive to domestic demand, has been on a steady increase for six months now, with the annual index reaching 11.9% in October. As a result of the global oil price explosion, market-determined household energy prices as well as vehicle fuel prices, rose at an over 25 % rate in the year to October.

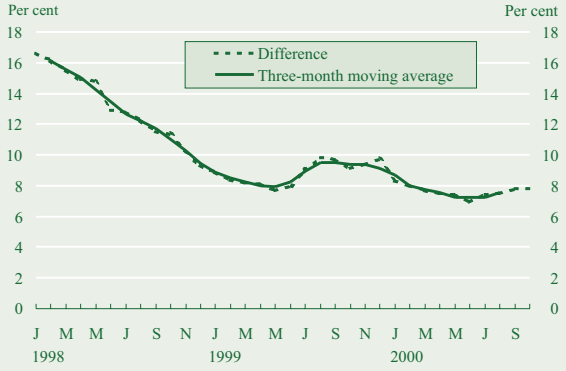
In respect of goods with *regulated prices,* the twelve-month inflation rate was only 7.0% in October, due to the government's price control efforts. Inflation in excisables excluding vehicle fuel (alcohol and tobacco) remained in excess of 10%, standing at 11.7% in October.

Prices that are highly exposed to idiosyncratic shocks (energy and food) have been significantly affected by inflationary pressures recently, especially compared with last year's favourable developments. Despite the government's efforts to dampen the unfavourable trend with the instruments at their disposal (such as the stringent control of regulated prices), they have not been able to neutralise the impact of input price increases and, in respect of agriculture, the export demand shock. This impact may be incorporated into inflation expectations, reflected in the slow but steady rise in services price inflation, which is less strongly influenced by external factors and exchange rate policy.

1 Inflation convergence

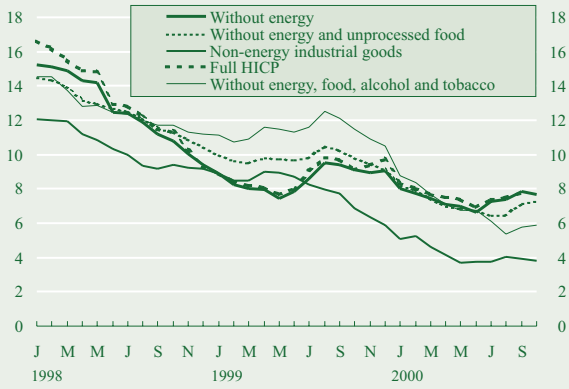
The European Union has recently been affected by the same inflationary shock as Hungary. Our main trading partners also experienced significant upward pressure on consumer energy prices (leading to a 16% year-on-year rise in September),

Chart I-1 **Inflation convergence: difference between the harmonised price indices of Hungary and the euro area**



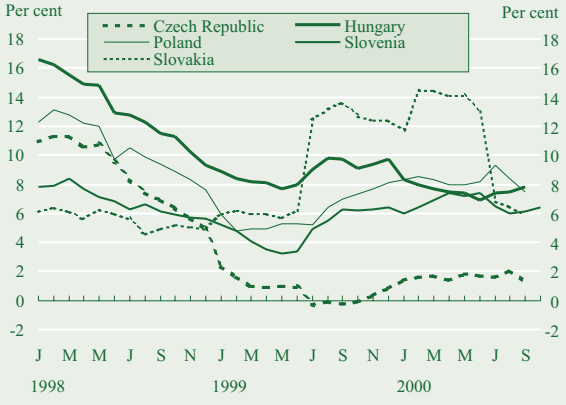
Source: Eurostat

Chart I-2 **Inflation convergence relative to the euro area – alternative indicators**



**Source: Eurostat, NBH calculation.*

Chart I-3 **Inflation differentials based on 12-month indices**



Source: Eurostat

Table I-1 **World market price levels in 1999–2000***

Percentage changes relative to the average for 1995

Per cent

	1999			2000		
	Q2	Q3	Q4	Q1	Q2	Q3
Commodities excluding energy	74.5	75.2	78.1	79.4	77.9	74.8
Food	73.3	71.6	72.3	74.4	74.0	70.6
Beverages	73.4	65.3	74.9	68.1	63.2	58.7
Agricultural raw materials	76.1	77.5	80.8	80.8	81.2	74.8
Metals	72.3	78.7	82.0	87.2	82.5	85.5
Crude oil	89.9	119.2	141.0	157.0	155.6	177.9

Source: IMF IFS
*World market prices in dollars.

triggered by the oil price shock. However, this rise remained below the Hungarian rate (24.4% in September and nearly 30% in October). Food prices also rose at a slower pace than in Hungary (by 2.2% in the year to October and 0.5% at the beginning of the year). The latter difference was partly due to the price stabilizing effect of the EU's common agricultural policy, an effect which has been much more efficient than in this country. The impact of the inflationary shock on the euro area's fairly stable services price index has been strongly muffled: the 1.9% rise in October was the result of a modestly rising trend from the 0.6% lower rate a year earlier. With the price index of internationally traded *industrial goods* edging up, the 12-month index stood at 0.8% in September, up 0.3 % on the figure for the middle of the year.

As a combined result of the above factors, the Eurostat's harmonised consumer price index (HICP) crept up to 2.8 % in the euro area in September, in a year-on-year comparison. The comparable figure in Hungary was 10.6%. This made it clear that the process of convergence, measured by the inflation differential, was affected by an adverse change *(see Chart I-1)*.

The factors to blame for the interruption of inflation convergence include the fact that the energy and July food price shocks had a stronger impact in Hungary *(see Chart I-2)*. Energy-producing materials are given smaller weight in the euro-area consumer basket than in Hungary (household energy at 5.5%, compared with 8.6% in Hungary; motor fuel at 4% and 4.9%, respectively), similarly to food prices (16.7% and 19.1%, respectively). Furthermore, food price swings had a much smaller amplitude in the euro area, thanks to more efficient market regulation and lower price volatility on the larger market. Nevertheless, the aforementioned factors fail to fully account for the adverse developments seen over the past six months. Convergence was also interrupted in terms of the indices excluding all major energy and food price effects, although the slight divergence seen between the original harmonised price indices becomes less clear now. The relationship between indices which exclusively remove the effect of energy prices followed a similar trend to that of the original harmonised price indices. Both the index calculated excluding all food, alcohol and tobacco, and the index only excluding unprocessed foodstuffs reflect stronger convergence as well as a later date for its interruption. The inflation differential relating to industrial goods directly disciplined by the exchange rate path remained at the level seen in the previous quarter. Consequently, it cannot be said for certain whether the price indices, i.e. the trend in inflation, have entered a divergent phase.

Incidentally, other Central and East European countries in a similar situation to Hungary have also been unsuccessful in making inflation rates converge *(Chart I-3)*.

2 Imported inflation

In 2000 Q3, commodity prices excluding energy and energy prices changed in a different direction to that seen in the previous quarter *(see Table I-1)*. Commodity prices in dollar terms were 4% down on the previous quarter (the second quarter registered a drop of 2%). The decrease was due to a 5% to 8% decline in food, beverages and agricultural raw material prices and a

3.6% rise in metal prices. At the same time, after a stable second-quarter, energy and oil prices rose by over 14% during the third quarter, despite the OPEC's repeated quota increase in July. This can be attributed to exceptionally low stock levels in the United States, the largest user. In addition to the impact of changes in world prices, Hungary was also affected by the 3.1% average depreciation of the euro against the dollar which took place during the third quarter.

In 2000 Q3, the *import unit value index* rose from 13.9% in the previous quarter to 15.0%. This exceeded the pre-announced devaluation rate of the forint's exchange rate by 10.5% and the depreciation in the nominal effective exchange rate index by 9.2%. The 11% year-on-year growth in the indicator calculated with effective foreign prices[1] was also above the index for the previous quarter *(see Chart I-4)*. These data suggest that imported inflationary pressure did not moderate during the third quarter, primarily as a result of the feed-through of the inflation trends experienced by our main trading partners. Another factor is the effect of last year's low base-period values, in view of the fact that short-term developments reflect a slightly different picture. Quarter-on-quarter price inflation derived from the seasonally adjusted import unit value index *(see Chart I-5)* implies that imported inflationary pressure, although still a factor in the Hungarian economy, has moderated somewhat. Imported inflation seems to have peaked during the second quarter of 2000.

Prices for imports from developed countries continued to increase in the third quarter, also spreading to *machinery* prices, which had previously been growing at a more moderate rate. In the third quarter prices in this product group rose by 8.9% in a year-on-year comparison. This was most likely due to the fact that rising energy prices and costs were beginning to feed through to foreign producer prices at that time. It also seems probable that this year's growth in demand exerted upward pressure on prices. Just as in the previous quarter, import prices from Central and East Europe continued to rise, up by 41.5%, due primarily to higher energy prices.In respect of price growth, energy import prices continued to top the list in the third quarter, up by 83.9% on a year earlier. Food, beverage and tobacco import price increases also gathered pace (10.4%). As in the second quarter, machinery price rises (9.2%) exerted further imported inflationary pressure. Imported inflation relating to processed goods and commodities remained at the previous high, 12.2% and 20.1%, rates, respectively. Clearly, the continuing third-quarter strengthening of imported inflationary pressure was equally due to imported energy and machinery inflation. The latter is likely to have been caused by positive demand shocks and rising costs.

This year, CPI inflation in the euro area was constantly in excess of the European Central Bank's 2% medium-term target *(see Table I-2)*. The twelve-month rate hit a six-year peak of 2.8% in September, compared with 2.1% in March and 2.4% in June. Price inflation was primarily triggered by high energy prices and the weakening euro, while CPI inflation excluding energy prices was

***Chart I-4* Changes in import prices and various exchange rate indices**

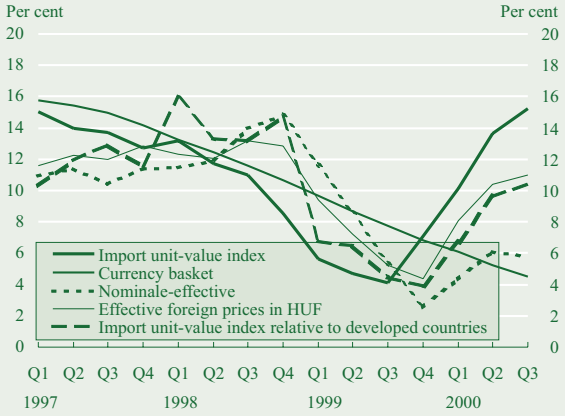


***Chart I-5* Quarter-on-quarter changes in the import unit value index**

[1] The imported inflation indicator calculated with effective foreign prices is constructed by multiplying the weighted average of the producer price indices of Hungary's main trading partners by the nominal effective exchange rate index.

Table I-2 **International inflation data, 1999–2000**
Percentage changes on a year earlier

Per cent

	March 2000		June 2000		September 2000	
	Producer	Consumer	Producer	Consumer	Producer	Consumer
	price changes					
United States	4.5	3.7	4.8	3.7	3.3	3.5
Japan	n/a	–0.6	n/a	–0.7	n/a	n/a
Germany	2.1	2.1	2.9	1.9	4.3	2.6
Czech Republic	5.1	3.8	5.0	4.1	5.4	4.1
Poland	7.3	10.3	8.7	10.2	8.3	10.3
Hungary	9.9	9.6	12.0	9.1	12.8	10.3
EU-11	6.2	2.1	5.6	2.4	n/a	2.8
EU-15	n/a	1.9	n/a	2.1	n/a	2.5

Source: Global Data Watch, J.P. Morgan's figures for 2000.

Table I-3 **Inflation rate of different goods and services***
Relative to same month a year earlier

Per cent

	Weight in CPI	Dec. 1999	2000					
			March	June	July	Aug.	Sep.	Dec.
Consumer Price Index (CPI)	**100.0**	**11.2**	**9.6**	**9.1**	**9.6**	**9.6**	**10.3**	**10.4**
Of which: Industrial products, excluding food, alcohol, tobacco and petrol**	26.7	6.5	5.2	4.3	4.3	4.7	4.7	4.7
Petrol	4.9	37.8	36.7	33.4	27.9	24.2	25.9	26.7
Non-regulated household energy prices	1.3	16.5	12.7	17.6	21.5	22.7	24.4	29.2
Food	19.1	5.4	5.6	6.4	11.8	14.4	15.3	14.1
Regulated prices	18.0	17.6	10.9	9.4	7.2	5.0	6.5	6.9
Of which: energy	7.3	6.2	5.1	5.5	4.8	6.3	7.9	8.8
Services	9.0	18.7	8.8	5.6	5.5	5.5	7.2	7.2
Market services	20.6	10.8	10.2	10.3	10.5	10.7	11.4	11.9
Alcohol and tobacco	9.4	10.6	11.7	10.5	9.9	10.5	10.7	11.2
Core inflation	89.9	8.8	7.5	7.0	7.4	8.5	9.4	9.6
Depreciation of the nominal effective exchange rate		2.7	4.1	6.2	6.0	5.7	5.6	5.4
Pre-announced nominal devaluation of the forint		6.7	6.0	5.1	4.8	4.6	4.4	4.3

* The classification of items included in the consumer basket is different from that applied by the Central Statistical Office. See the Bank's *Quarterly Inflation Reports* for more details.
** We have modified the methodology used in previous *Reports* in respect of the classification of industrial goods and market services (see Box for more details).

Chart I-6 **Industrial goods prices**

up by 1.6%. The highest rate of inflation was measured in Ireland at over 6%, while the lowest rates were seen in Austria and France, at 2.2% and 2.3%, respectively.

Twelve-month CPI inflation in the European Union countries stood at 2.5% in September. In the United States, the peak of 3.7% for CPI measured in March and June (the highest rate measured in recent years) fell to 3.5% in September, while core inflation remained at the end-of-July rate of 2.6%. So far the inflationary pressure from high energy prices has been broadly offset by rapid productivity growth from IT advances. The slowdown in economic growth seen in the third quarter also exerts downward pressure on inflation.

In September the twelve-month rate of inflation in the Czech Republic held steady at the 4.1% rate measured in June. According to the different forecasts, despite stronger economic activity and steady energy and food price increases, CPI inflation in December will be 4.4% at most. This year's CPI inflation in Poland remained virtually flat, at slightly above 10%, with a 10.3% rate in September.

The inflation outlook for 2000 depends on the extent to which the upward pressure exerted by food and fuel prices feeds through to wage and services prices.

3 Components of changes in consumer prices

Industrial goods

Changes in the prices of internationally traded industrial goods play a prominent role from the aspect of monetary policy. (We have modified the methodology used in previous *Reports* in respect of the classification of industrial goods and market services, see Box for more details). Due to international competition, prices in this category are basically determined by the prices of (potential) imports calculated in forints. Both foreign and domestic prices in this category are fairly stable. Consequently, changes in industrial goods prices convey high-quality information on the transmission mechanism of monetary policy and the exchange rate path *(see Table I-3).*

Industrial goods prices, accounting for 26.7% of the consumer basket, *(see Chart I-6)* increased at a favourable rate of 4.7% in the year to October. Within this group, the twelve-month price index of non-durables, accounting for 19.5% of the basket, rose from 5.3% in July to 6% in October.

On the other hand, the price level of durable consumer goods, with a basket-weight of 7.1%, remained basically stable, with the twelve-month price index hardly in excess of 1%. During the autumn, prices of the cultural items component continued the downward trend which started in April.

The average rate of industrial goods price inflation was only exceeded by that of building materials, included with the item of *owner occupied housing,* due partly to increased energy costs.

The Bank last reduced the devaluation rate of the forint in April (from a monthly 0.4% to 0.3%), which was followed by an announcement at the end of the summer that there would be no

further cut for the remainder of the year. Thus, the halt in tradables inflation is not in contradiction with the exchange rate path, which is reflected in the fact that *relative twelve-month inflation* of industrial goods, as compared to the rate of devaluation, although slightly rising, continued to remain within the 1% range[2] *(see Chart I-7)*. This implies that the pre-announced exchange rate path is continuing to act as a nominal anchor.

Energy price shock

The Hungarian economy has recently been hit by two significant inflationary shocks. First, energy (oil and natural gas) prices have been rising sharply at a nearly uninterrupted pace for one and a half years; and second, there was an upsurge in food prices at the end of the summer.

The monthly average price of a barrel of Brent in euro terms increased over 4.5-fold from the December 1998 low. The price of natural gas imported by Hungary is linked to the world price for oil, following it with a nine-month lag in a smoothed way, as a result of a contract, which is quite unfavourable under the present circumstances.

The latter factor deserves special attention, as the Hungarian use of natural gas outstrips oil consumption (in terms of heating value equivalence). In other countries rises in the price of imported natural gas do not follow – at least in the short run – oil price inflation. This means that Hungary was hit by an especially high-amplitude energy price shock, even in international comparison.

As, however, world oil prices have been going up for one and a half years now, and the incorporation of gas price increases into inflation was in fact prevented by the government with administrative measures, the shock probably did not directly speed up third-quarter inflation, relative to previously. Thus, the mid-year adverse reversal in disinflation cannot be attributed to a *direct* impact of energy price explosion.

It can be seen from *Chart I-8* that the oil price shock had the strongest impact on the Hungarian economy in 1999 Q4. The 63.5% rate of year-on-year price inflation seen in 2000 Q3 was no 'novelty' as for the past six quarters energy import prices have been rising at a year-on-year rate of above 60%.

The last one and a half years have seen a steady year-on-year rise of 30% and 50% in motor fuel and bottled gas prices, accounting for 5% and 0.5% of the consumer basket, respectively. Market-determined energy and motor fuel prices rose at an annual rate of 25.7% over the past one and a half years (in October 2000, the combined twelve-month price index stood at 27.2%). Due to the 6.3% weight of this category in the consumer basket, the twelve-month rate of inflation rose by 1.6–1.7% over the last one and a half years on account of this product category alone, as a *direct* impact of the oil price shock. This impact can be regarded as temporary because if oil prices and the associated gas prices

Chart I-7 **Twelve-month relative inflation rate of industrial goods**

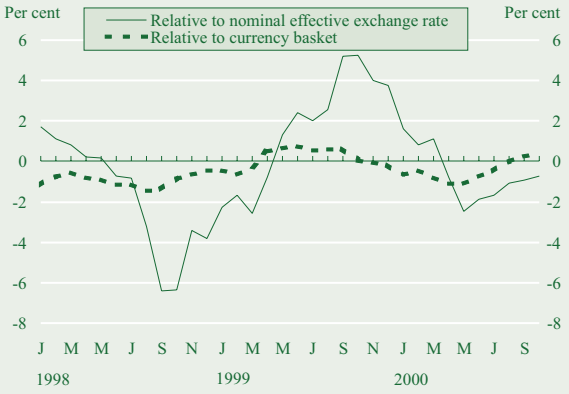
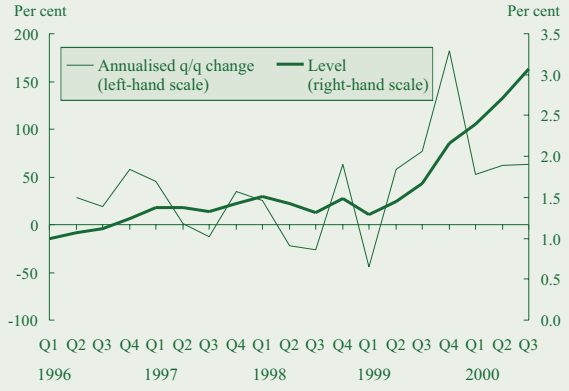
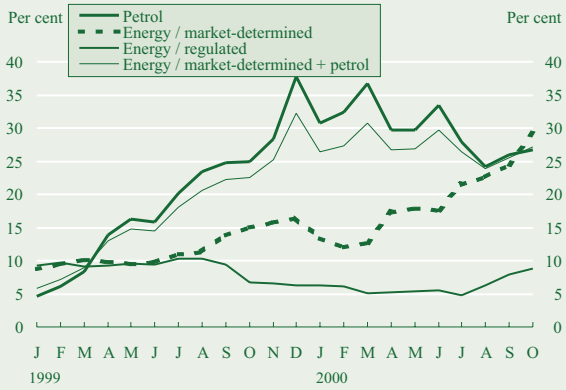


Chart I-8 **Changes in energy import prices in forint terms**



[2] The change in the methodology reduced the figure for relative inflation by 0.5–0.7%. Under the former methodology, industrial goods' relative inflation would have slightly exceeded 1%.

***Chart I-9* Changes in energy prices**



even just stabilize at the current level, this will reduce the rate of inflation by the same percentage.

As far as the *direct* inflationary effect of energy prices is concerned *(see Chart I-9),* there is a conspicuously widening gap between centrally controlled and market-set energy price indices within the household energy category (up by 8.8% and 29.2%, respectively, in a year-on-year comparison). Market-priced energy, with a weight of 1.3%, has followed the world market trend. Prices of solid fuels (such as coal, briquette and firewood) rose by 13–18% over the twelve months. Oil and gas import prices also went up sharply in the third quarter.

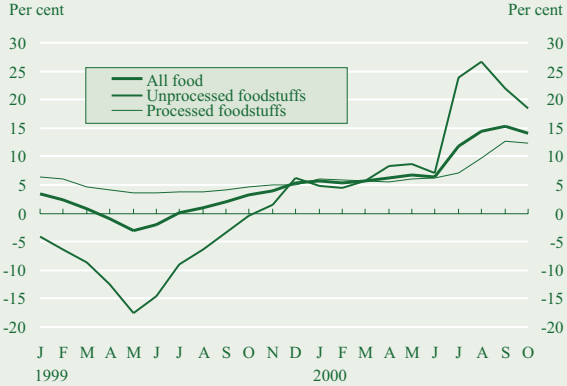
This almost immediately fed through to the price for bottled gas, pushing its price up one-and-a-half times during the course of one year.

The control mechanism of *centrally regulated energy prices*, accounting for 7.2% of the basket, resulted in a 12% rise in the price for natural gas (and a linked 5% increase in district heating) as of July 1st. This proved to be far insufficient to offset the rise in import costs. In an effort to relieve tensions on the gas market, the government raised gas prices for large users by 43% as of November. This measure does not directly affect household costs (even district heating prices remaining unchanged), but it is likely to exert indirect inflationary pressure, with November and December being the earliest time when the feed-through would be reflected in the price indices. Higher energy costs may be passed on to product prices, and the extra costs incurred by electricity production, the chief user of energy input, would account for a relatively large rise in electricity prices in January. In October, the 8.8% twelve-month rise in centrally controlled household energy prices was below the rise in the general price level.

Thus, the *direct* impact of imported energy price rises on domestic consumer prices was considerably dampened by economic policy to the extent that only a small portion of the increase in input costs was allowed to be passed on to household prices by the central setters of pipeline gas and public transport prices. (Freezing the excise duty content of motor fuel prices is intended to serve a similar anti-inflationary objective in the future.) This kind of 'stifling' of a rise in the price level together with the oil price explosion, which is expected to boost costs indirectly and after a long lag, may become important inflationary factors.

Food price shock

***Chart I-10* Food price changes**



The unexpected jump in July in the prices of *unprocessed foodstuffs* (accounting for 5.4% of the basket) supplied the other crucial inflationary shock for the economy *(see Chart I-10)*. The seasonally adjusted index rose by 14.4% in the course of one month.[3] This shock fed through to processed foodstuffs (with a 13.8% weight) after a lag and significantly dampened. The seasonally adjusted price level of this sub-category rose by 1.25%, 2.81% and

[3] In July 2000, unprocessed foodstuff prices rose by 11.3% on average, although thanks to seasonal effects prices for unprocessed foodstuffs normally fall during this month. There were exceptional rises in pork and eggs prices.

3.20%, on a monthly basis, in July, August and September, respectively. As a consequence, the 12-month index for food reached the 12–15% range in the third quarter, compared with 6–7% a year earlier, and the year-on-year index in October declined only to 14.1%. Thus, rather than remaining below the overall rate of CPI inflation, food prices have risen at a significantly higher rate than previously.

As is *shown in Chart I-10,* the rise in food prices occurring late in the summer did not only cause a one-off shift in the price level in line with expectations, but was partially corrected as early as by August in respect of unprocessed foodstuffs. Thus, the shock is not expected to exert lasting upward pressure on inflation. The jump in the price of unprocessed foodstuffs in July, due primarily to the marked expansion of the export taking capacity of East European markets was built into processed food prices after a lag of one or two months. However, even in respect of the latter category, the seasonally adjusted monthly price index shows signs of a correction.

Food, especially unprocessed foodstuffs, constitutes one of the least stable categories of the consumer price index. Its considerable short-term volatility and unstable seasonality obstruct statistical analysis and render related forecasting rather unreliable. It is vital, therefore, that in the assessment of inflation trends the 'distorting' effect of food prices on overall consumer price indices should be taken into account to the greatest possible extent.

Market services

It is a lingering cause for concern that the price index of market services is exceeding the tradables price inflation to an ever increasing degree *(see Chart I-11).* In contrast to industrial goods prices, which are controlled by the exchange rate path, under the current system, monetary policy can only influence inflation in market services prices to a limited degree. The cornerstone of exchange-rate-based disinflation lies in the capability of the economy's complex equilibrium mechanisms to influence non-tradable prices, structurally 'protected' from international competition, ensuring that they change consistently with import prices over the long term.

Prices of market services rose nearly 7.2% faster than the aggregate price for industrial goods in the year to October, though the quarter-on-quarter (seasonally adjusted index) suggests that the opening of the 'price gap' came to a halt during the third quarter. According to calculations by National Bank analysts, the varying rate of productivity growth across the various sectors accounts for a 4–6% inflation differential over the long term, given the current stage of economic convergence. This implies that the 7% change in the price ratio, characteristic of the first ten months, is hardly sustainable.

The problem is rooted in the fact that the twelve-month price index of *market services,* with a weight of 20.2%, has been on a steady rise since the third quarter, remaining just below 12% in October.

In the following section the notions of food price shock and wage inflation inertia are to be investigated by dividing *market services* into three groups. These are 1) the *food-price-sensitive*

Chart I-11 **Inflation in respect of major aggregates**

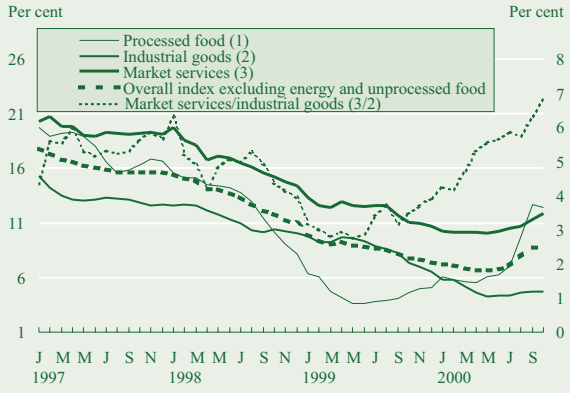


***Chart I-12* Inflation relating to the sub-groups within services**

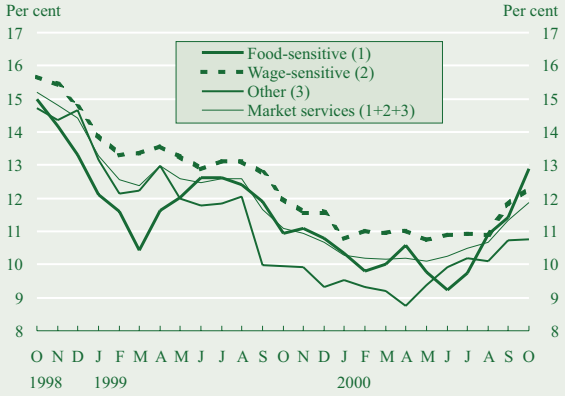
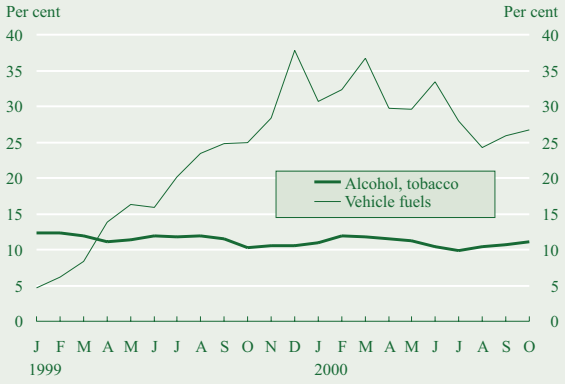


***Chart I-13* Excisable goods prices**



group,[4] with a 4% weight, 2) *wage-sensitive*[5] services, which are highly labour-intensive and account for 9% of the consumer basket, and 3) *other*[6] items, with a weight of 7.2%, i.e. *market services* that have remained outside the former two groups.

Chart I-12 shows that the food-sensitive group was keenly affected by the July food price shock. The twelve-month index of the wage-sensitive group rose significantly during September and October, but this does not necessarily signal a long-term trend, two months being too short a period to draw far-reaching inferences. At least labour market data do not seem to confirm any acceleration in wage inflation within this sector.

Excisables and goods with regulated prices

In respect of *excisables*, with a 14.1% weight, the previous trend continued *(see Chart I-13)*.

Prices for *alcohol* and *tobacco*, accounting for 9.1% of the consumer basket, rose by 11.2% in the year to October, which exceeded the rise in the headline CPI. This was partly due to the increase in the excise duty content of tobacco prices early in the year[7] and partly to higher import prices at mid-year, which triggered an over 3% increase during the period from July to October. Wine prices rose by 13% over one year, 5% of which took place after July. The factors to blame for this above-average increase include the introduction of excise regulations during the first half of the year, the pass-on of the resulting costs to prices and the contraction of the black market. The rate of excise duty payable on wines was officially introduced in August (5 forints per litre).

In respect of *petrol*, the increase in the excise duty would have resulted in a rise in price which would have been less than 4%. Nevertheless, as a result of the extremely high world price for oil (in dollars) and the weakness of the euro (and the linked forint) against the dollar, petrol prices rose at an exceptionally high rate of nearly 27% over the past twelve months. Despite several predictions of an interruption in the increase of world market prices during the year, this did not occur, and fuel price inflation in the autumn was virtually the same as in summer. Due to the 4.9% weight of petrol, this led to a roughly one percent 'unanticipated' rise in the twelve-month rate. Nevertheless, in the course of November petrol prices dropped by 3 forints on two occasions, the impact of which is likely to be reflected in the CPI at the end of the year.

The anti-inflationary impact of the strict central pricing policy was not only felt in respect of regulated household energy prices, but throughout the entire category of regulated prices as well *(see*

[4] The *food-price-sensitive* group comprises restaurant and canteen, school and kindergarten/crèche meals, and buffet goods, as well as – due to the statistical properties of the stratum – domestic holidays without a voucher.

[5] The *wage-sensitive* category comprises *clothes, household appliances, home improvement and vehicle repair, cleaning/laundry, beauty services, health and education, maintenance of cultural items,* as well as *espresso coffee*.

[6] This category includes the items that have been left out of the two special groups, such as *newspapers/periodicals, books, textbooks, apartment block service charge, car rental, taxi, haulage, theatre, cinema, sports events, holiday abroad, photographic supplies* and the rest of *(unlisted) services*.

[7] As reported in the June issue, specific excise duty rose by 15%, which raised prices within this category by about 6% in its own right.

Table I-4 **Centrally regulated or influenced prices ***
Year-on-year and ten-month (in 2000) growth rates**

Per cent

	Weight in 2000	Twelve-month price indices							Ten-month price indices		Difference in percentage points
		1999	2000						1999	2000	1999–2000
		December	March	June	July	August	September	October			
Controlled prices	**17.99**	**17.6**	**10.9**	**9.4**	**7.2**	**5.0**	**6.5**	**6.9**	**18.1**	**7.4**	**–10.7**
Goods	**8.99**	**16.4**	**13.2**	**13.7**	**9.0**	**4.5**	**5.8**	**6.5**	**17.6**	**7.6**	**–10.0**
Of which:											
Household energy	**7.29**	**6.2**	**5.1**	**5.5**	**4.8**	**6.3**	**7.9**	**8.8**	**6.1**	**8.6**	**2.6**
Central and district heating	1.84	6.0	5.8	6.3	6.6	7.1	7.5	9.6	10.1	6.3	–3.7
Electricity	3.29	10.1	7.4	7.8	7.7	6.7	6.3	6.3	1.1	12.0	10.9
Gas supplied through pipes	2.16	1.1	1.0	1.4	–1.2	5.0	10.6	12.0	6.1	8.6	2.6
Pharmaceuticals, medical products	**1.70**	**56.9**	**42.9**	**43.5**	**22.0**	**–1.0**	**–-0.9**	**–1.0**	**63.5**	**3.2**	**–60.3**
Services	**9.00**	**18.7**	**8.8**	**5.6**	**5.5**	**5.5**	**7.2**	**7.2**	**18.6**	**7.1**	**–11.5**
Of which:											
Housing	2.48	15.3	13.7	12.3	12.3	12.1	12.0	12.1	15.0	11.9	–3.1
Transport	1.89	13.4	6.3	6.1	6.1	6.3	6.3	6.3	13.4	6.3	–7.1
Communications	3.78	25.3	6.6	2.1	2.1	2.0	6.0	6.0	25.3	6.0	–19.3

* Television subscription fees, carrying a 0.66% weight in the consumer price index, have been divided into a centrally regulated portion (0.31%) and a market subscription fee (0.36%). Regulated prices include only the former component, which has not changed since last year.
** Due to rounding, sums do not always add up accurately.

Table I-4). As a result of last year's modification of the system of subsidies, *pharmaceuticals* prices surged, the protracted impact of which was still felt during the summer. Prices in this category only rose by 3.2% during the ten months to October. This was due to the government's June measure of fixing prices for 180 days[8] and launching negotiations with manufacturers and distributors seeking to agree on a price strategy for the period 2000–2003. The government's aim is to keep producer and import prices unchanged during this year and, over the forthcoming years, to confine pharmaceuticals price inflation to below 70% of the projected rate of inflation. The low pharmaceuticals price index played a key role in narrowing the gap (by one percentage point) between core inflation and the CPI during the autumn.

The twelve-month price index of *regulated services*, accounting for 9% of the consumer basket, was much lower in October (7.2%) than that of the market services (11.9%). The timing of price changes across the year differed from the trend seen in previous years. The subdued rate of increase can be undoubtedly attributed to the fact that rises in *centrally controlled* prices – for transport and communications – did not exceed the planned target of 6%. In general there was only one change in the centrally regulated service prices, in the course of February and March. This triggered cost-side tension on account of *transport services* as the pre-agreed rise in the charges failed to cover the costs incurred by higher-than-expected fuel prices. This year the measure of inflation relating to *telephone services* followed a different trend to that seen previously. The '*price cap*' set on the household service price index stood at 6%, and the spring index reflected changes that were in accordance with this regulation. However, the launching of various discount packages during the

[8] Until December 26th.

Chart I-14 **Breakdown of regulated price levels according to regulating authority**

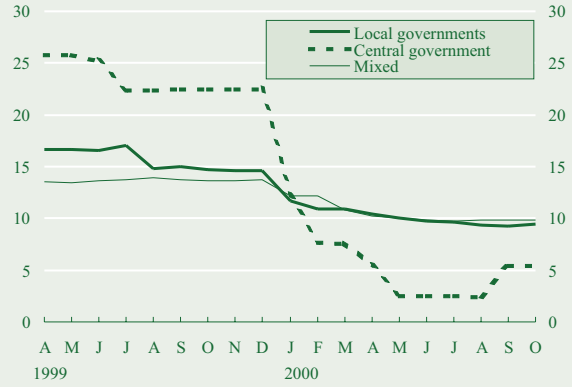


Chart I-15 **Comparison of core inflation indices and the CPI**

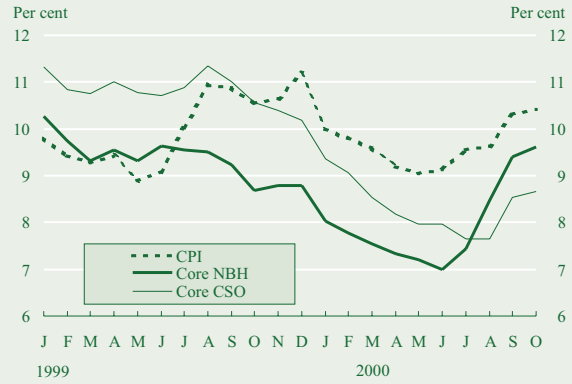


Table I-5 **Components of the NBH core inflation and the consumer price index**

Per cent

	Aug./Aug.	Sep./Sep.	Oct./Oct.
Unprocessed foodstuffs	0.50	0.25	0.09
Household energy + vehicle fuels	0.90	0.93	0.96
Pharmaceuticals	–0.25	–0.26	–0.26
Total	1.15	0.91	0.79
CPI	109.6	110.3	110.4
NBH core inflation	*108.5*	*109.4*	*109.6*

Table I-6 **Components of the NBH core inflation and the consumer price index**

	Weight in CPI	Aug./Aug.	Sep./Sep.	Oct./Oct.
Pharmaceuticals	1.7	–0.26	–0.27	–0.27
Energy	7.8	–0.01	–0.09	–0.22
Unprocessed food	3.1	–0.56	–0.51	–0.47
Total		–0.83	–0.87	–0.95
CSO core inflation	*80.5*	*107.6*	*108.5*	*108.7*
NBH core inflation	*89.7*	*108.5*	*109.4*	*109.6*

summer provided an incentive for using fixed-line telephones, pushing the twelve-month price index down to below 2%.[9] But when the period of these special discount rates came to an end in the autumn, the prices returned to the level seen in the spring, reflected in a 4% rise in September.

The annual rate of inflation relating to houses and flats owned by *local authorities* stood at 12%. The extra costs incurred herein were largely passed on to consumer prices, and rents continued to edge up during the autumn *(see Chart I-14)*.

In order to illustrate the disinflationary effect of the moderate price increases in the regulated services category, we have compared only increases that are *'newcomers'* in the current year, rather than the twelve-month rates of price level change.[10] Regulated price changes that were newcomers this year were nearly 11 percentage points lower than those last year. This, in turn, reduced this year's rate of inflation by nearly 2 percentage points.

4 Core inflation

The Bank describes the trend of inflation in terms of a *core inflation index* calculated using the Bank's own methodology. The differences between core inflation and the overall consumer price index are listed in *Table I-5*. In October, the core inflation index stood at 9.6%, thanks primarily to a one-off jump in unprocessed food prices, the effect of which is only partially removed from the index. Nevertheless, the stubborn increase in the services price index warns of the danger of inflation inertia and the associated long-term interruption in disinflation *(see Chart I-15)*.

In addition to the CPI, the Central Statistical Office also publishes a core inflation index, excluding unprocessed foodstuffs (whereas the Bank's core inflation only filters out the effects of items that are statistically highly problematic and have unstable seasonality). In the third quarter the annual indices calculated by the CSO and the Bank "traded places", i.e. in contrast to the past, the CSO's core inflation index has remained below the Bank's since August. This is partly due to the fact that, as they were excluded, unprocessed foodstuffs did not raise the relative level of the CSO's index, whereas the index fell thanks to last year's high base-period values relating to pharmaceuticals prices, which are, in turn, excluded from the Bank's index. Accordingly, the CSO's annual index stood at 8.7% in October *(see Table I-6)*.

[9] The timing was partly due to a provision in the measure stating that should the August/December telephone service price index exceed the prescribed rate as recorded in the Central Statistical Office's August CPI statistics, then telephone charges would have to be reduced in order to comply with the regulation.

[10] See final three columns of Table I-4.

Box I-1 Changes in the classification methodology of industrial goods and market-priced services

The Central Statistical Office (CSO) gives nearly 6% weight to the imputed price of *owner occupied housing (OOH)* (stratum 611). This stratum is intended to monitor changes in ***capital costs***, i.e. the 'consumer price' of housing. This item should not be confused with changes in the *maintenance* costs of flats and houses, which are represented in the statistics by the items of *articles of home improvement and maintenance* (stratum 510) and *home improvement and maintenance* (stratum 613), with weights of 0.6% and 1.5%, respectively. The representation of *OOH* in the CPI raises a number of theoretical difficulties. (For detailed discussion of this subject, see *Ferenczi-Valkovszky-Vincze: What are Consumer Price Statistics Good for?; NBH Working Paper Series, 5/2000.*)

According to the methodology used by the CSO, the weight of the 'rent' of OOH (stratum 611), is estimated as a service, using the household panel statistics, and the price index is given as the arithmetical mean of the other two housing-related price indices (stratum 510 and 613). This technique is probably based on the implicit assumption that the price index for the 'correct rent' of owner-occupied houses and flats is identical to the inflation of replacement costs (i.e. the construction cost of newly built houses and flats). The latter, in turn, can be approximated with a price index which is a half-and-half mixture of building material and construction service price indices.

The use of this technique implies that households' property investment is regarded as an element of current consumption, even though the above-described method is clearly biased. In this case, however, the item of *OOH* (stratum 611), which is given a rather large weight, cannot be regarded as either an *industrial good* or a *market service*. Previously, due to the statistical behaviour of this stratum, this item was purely regarded as an *industrial good* (see page 20, December 1999 issue of the *Report*). Based on the CSO's above-described procedure and the accompanying reasoning, it would seem more expedient to 'split' the item up into the original two strata, as this is what actually happens when the weight of the items of *articles for home improvement and maintenance* (stratum 510) and *home improvement and maintenance* (stratum 613) is in effect raised by 3%, as a result of imputing the *OOH* cost index. In practice this means that the original CSO weights are modified as presented in *Table I-7*. (Naturally, this is not only done to the weights for 2000, but also to the others retroactively.)

Table I-7

	Original weights	Corrected weights
510 Articles for home improvement and maintenance	0,623	3,602
611 Owner occupied housing	1,530	4,509
613 Home improvement and maintenance	5,958	0

This modification affects the *industrial goods* and *market services* categories, as well as the calculation of the time series based on them. What in fact happens in the course of the correction is that the 'half' of stratum 611 which belongs to stratum 613 and which nonetheless previously was included with *industrial goods,* is transferred into the *market service* category corresponding to stratum 613. The effect of the methodology change is illustrated in Charts *I-16 and I-17*.

It is clear from the charts that the price index for *home improvement and maintenance* (stratum 613) is generally below the price index for *services,* but is typically higher than the price index for *industrial goods*. Consequently, the transfer of a 'service'[11] accounting for nearly 3% of the consumer basket into market services results (typically) in the confusing outcome of reducing the value of both the services and the industrial goods indices.

Chart I-16 **Effect of correction related to the item of 'owner-occupied housing' on twelve-month price indices**

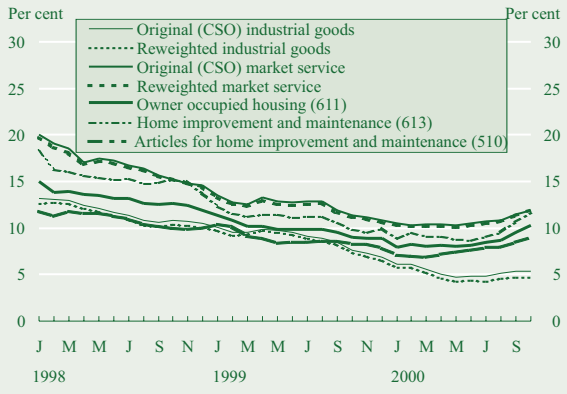
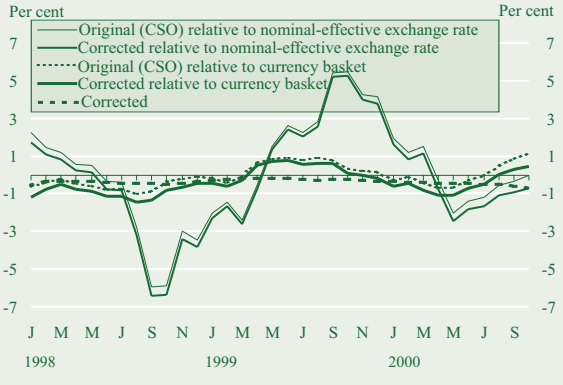


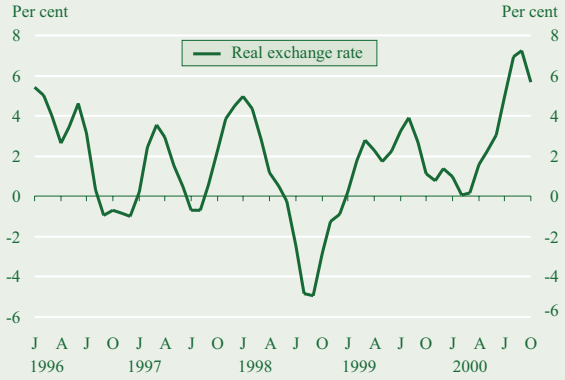
Chart I-17 **Effect on the relative inflation index of industrial goods of a correction of the accounting of imputed housing maintenance cost**



[11] Remember that stratum 611 is an imputed item, thus its 50% service content can only be regarded as an actually consumed market-priced service under certain stipulations.

II. Monetary policy

Chart II-1 **Chart II-1 Monetary conditions: the real exchange rate calculated with EMU inflation***



* The real exchange rate, calculated using the new methodology introduced in the September *Report*, also takes account of the fact that inflation is also subject to change in the euro area. For a description of the calculations, see related Box in the September 2000 *Report*.

1 Monetary conditions and changes in the interest rate and the exchange rate

Economic growth in Hungary continued to slow during 2000 Q3, with GDP growing by 4.6%. In contrast to previous quarters, the driving force behind growth was domestic absorption, while the contribution of net exports moderated. The external balance position remained better than last year, but there was a reversal in the improving trend in the current account. The third-quarter continued to be affected by adverse inflationary developments, and even core inflation indicators reflect an interruption in the disinflation process.

As in the second quarter, the development of the real exchange rate continued to call for tight monetary conditions in the third quarter, while the real rates of interest continued to decline *(see Chart II-1)*. Real appreciation of the exchange rate slightly slowed in October.

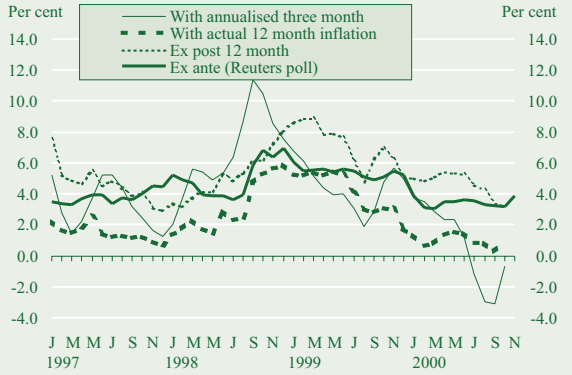
The falling trend of real interest rates was interrupted when the National Bank of Hungary raised interest rates as of October 11th. For the first time in two years, the central bank implemented a significant – 100-basis-point – rise in the rates on the two-week deposit facility, the overnight active repo and deposit. This uncommonly high increase was prompted by the unfavourable trend in inflation, and, more directly, by the publication on that day of the September rate of inflation. The higher-than-expected price inflation continued to be due primarily to factors falling outside the scope of monetary policy. At the same time, in such a situation, it is a priority of the central bank to do its utmost to prevent the incorporation of inflationary shocks into expectations, as an excessive rise in inflation expectations may reinforce the inertial component of inflation, protracting the process of disinflation and generating additional costs.

As the use of different calculation methods can lead to major discrepancies in the level of the real rate of interest, we present a description of the various approaches in *Box II-1*. Quarter-on-quarter indicators used in the *Inflation Reports* to describe monetary conditions have recently introduced significant downward bias into real interest rates and an upward bias into the real exchange rate. In respect of both indices this bias was due to the characteristics of seasonal adjustment and annualisation processes used in the course of calculating inflation. Despite the difference in the levels, each real interest rate indicator followed a downward trend up to September, while October saw an equally unanimous reversal.

Box II-1 Different methods for calculating the real rate of interest

One of the constituents of monetary conditions, regularly monitored in the Bank's *Inflation Reports*, is the real rate of interest. As apart from the extremely illiquid capital-linked bonds, Hungarian financial markets have no bonds with yields fixed in real terms, the "real rate of interest" is always a constructed measure. It can be calculated via several methods which vary widely in terms of both concept and outcome. The different techniques all have their advantages and disadvantages. The real interest rate measure which has been preferred by the National Bank so far and used in its *Inflation Reports* was markedly lower during the previous quarter than the alternative indices. This phenomenon has raised the need for the publication of alternative real interest rate measures as well, together with a detailed introduction.

Chart II-2 **Real rates of interest calculated with different techniques**



There are essentially three methods for computing the real interest rate:

1. Ex post real interest rate. The ex post real rate is the real yield actually realized by bond investors. For example, a 12-month ex post real yield is calculated by deflating the 12-month nominal yield of a year ago with inflation measured during the bond's term to maturity, i.e. the past 12 months. The shortcoming of the measure thus constructed is that, as the nominal rate of interest used is a historical one (that of 12 months ago in our example), it takes no account of the most recent developments in monetary policy. Consequently, it does not appropriately express recent developments in monetary conditions.

2. Ex ante real interest rate. This measure is calculated by deflating the current nominal rate of interest with investors' inflation expectations for the relevant period. Of all possible real interest rate concepts, the ex ante real interest rate is the most meaningful in terms of economic theory, being the real rate relevant to households' consumption and investment decisions. As it contains the current nominal rate and current expectations, it is in principle an ideal mirror of monetary conditions. However, in practice, its serious drawback is that there is no reliable and sufficiently representative information available on households' inflation expectations relating to different time horizons. Calculation of the ex ante real rate published in this *Report* is based on the results of the monthly Reuters survey of 15–20 macroeconomic analysts on their inflation expectations. Apart from the small size of the sample, this procedure has the drawback of being confined to surveying inflation expectations about fixed dates (end of the current and next year). Consequently, the 12-month inflation expectations used here have been calculated via interpolating between the fixed dates.

3. "Traditional" real interest rate. Due to the unreliability of data on inflation expectations and the low information content of ex post real rates, the most widely used technique involves deflating the current (e.g. 12-month) nominal rate with the latest realised (year-on-year) inflation. Despite the fact that this real rate is derived from the latest information, it is not really meaningful in terms of economic theory. Moreover, if there is a persistent downward trend in inflation, then the "traditional" real interest rate measure will be continuously below the ex ante real rate, which is relevant from the point of view of economics. The more backward-looking the inflation used for the calculation is, the more pronounced this bias is. Therefore, this technique is widespread in countries with a stable rate of inflation: in this case the "traditional" measure will be closer to the theoretically meaningful ex ante real interest rate.

In view of the shortcomings of the above-listed real interest rate measures, in the National Bank's previous *Reports* we used annualised, seasonally adjusted three-month inflation for the calculation of real rates.

4. Short-term annualised real interest rate. This measure can be regarded as a special variant of the "traditional" real rate. It uses inflation data from the recent past (the Bank's index looks back on the preceding three months), and the nominal interest rate applied is the current measure of the three-month benchmark rate. Thanks to the shortness of the backward-looking period, when there is a downward trend in inflation, this indicator has a smaller downward bias than the 12-month "traditional" real rate (i.e. it remains below the ex ante real rate by a smaller margin). However, as three-month inflation exhibits considerable seasonality in contrast to the 12-month rate, the inflation rate of the past three months is derived from the trend-cycle of the seasonally adjusted price level, and then this three-month trend inflation is annualised. However, this is exactly where the disadvantage of the method lies. Should there be a temporary jump in the three-month trend obtained after the seasonal adjustment, this will be significantly magnified by the annualisation. Thus, the estimated trend will be much higher than the "genuine" trend of inflation. This is what happened during the previous quarter, when the level of the seasonally adjusted three-month real interest rate calculated by the Bank plunged into the negative range, well below the level of the alternative measures of the real rate, even though it moved in the same direction as those.

As far as the monitoring of monetary conditions is concerned, there is no ideal measure of the real interest rate. Recent developments are unanimously reflected in terms of all alternative real rates *(see Chart II-2)* as a decline in the period between July and September, brought about by the inflationary shocks. This trend then reversed in October, after the central bank raised its benchmark rate. The actual *level* of real rates is best reflected in the ex ante real rate. Although this measure of the real interest rate was at a historical low during the July-to-October inflationary shocks, this was still no cause for major concern as the index did not drop below 3.2% in any month. Following the central bank's interest rate hike, it rose considerably, to 3.8%, in November. Nevertheless, caution should be taken as the inflation expectations which form the basis for this index are non-representative. Due to the nature of seasonal adjustment and annualisation applied in its construction, the three-month annualised real interest rate used in previous *Reports* this time conveyed information only about the direction of the real interest rate change in the previous quarter as its level was strongly downward-biased.

Box II-2 Changes in central bank instruments

Deposit tenders

Beginning with the November reserve maintenance period, the central bank altered the conditions for the use of the two-week remunerated deposit facility, switching over from periodical availability to a system of volume bidding. Previously, the Bank had set no limits on the volume of approved bids at the announced – benchmark – rate. Within the framework of volume tenders, the Bank will announce a specified amount to be placed as deposits with the authorities, for which the Bank's clients may submit competitive bids, indicating their interest rate offers, taking into view the pre-set *interest rate ceiling*. Bids are invited on a weekly basis, and the actual amounts to be tendered are announced five weeks prior to bidding.

The system of volume bidding for this benchmark instrument is consistent with European Central Bank procedures, with the only difference being that it is an active instrument in the case of the ECB, and therefore the interest rate limit refers to a minimum rate. Furthermore, volume bidding expands the mobility of the central bank's interest rate policy, granting it greater flexibility in setting the term to maturity of the stock of sterilization instruments.

Changes in the reserve requirement

The National Bank of Hungary is to introduce a new reserve requirement system to become effective on February 1, 2000, cutting the required reserve ratio from 11% to 7%. The change is expected to boost competitiveness within the banking system and reduce the rate of income siphoned off. At the same time, as the central bank must avoid excessive increases in the money supply, the excess liquidity created as a result of the cut in the reserve requirement is to be neutralised by means of selling floating-rate government bonds.

Chart II-3 **Central bank interest rates and short-term market yields**

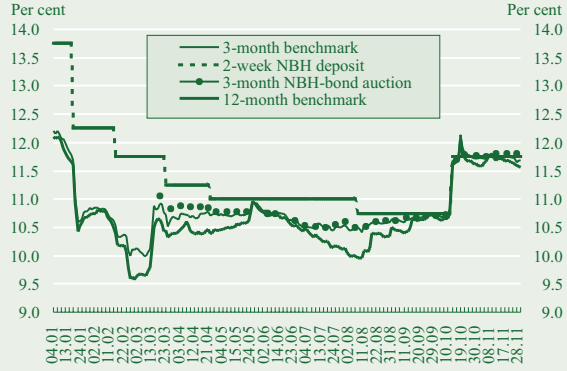
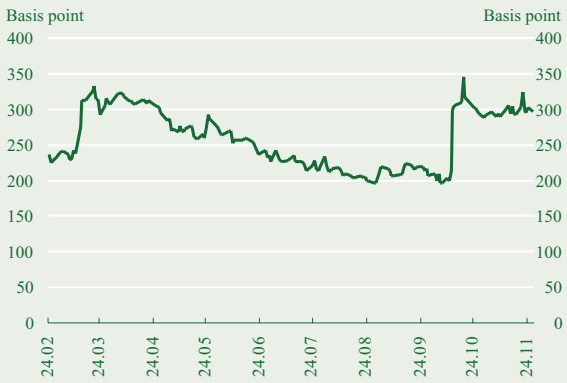


Chart II-4 **Three-month interest rate premium**



Monetary policy can, in principle, tighten monetary conditions and influence inflation expectations using the instruments of either interest rate policy or exchange rate policy. However, the prevailing exchange rate regime has not enabled an effective policy response to the adverse inflationary developments. In the absence of an agreement with the government on the timing of the modification of the exchange rate regime, the National Bank was only left the instruments of interest rate policy by which to respond to the inflationary shock. Following the interest rate hike, as of October 30th, there were also changes to the central bank instruments, more specifically, the use of the two-week deposit facility.

The September inflation rate and the central bank's interest rate hike had strong reverberations in the government security market, exerting similar upward pressure on short-term yields as the rise in the interest rate. At the same time, the reaction was somewhat milder at the longest, 10-year, end of the yield curve *(see Chart II-3)*. Despite the approximately 100-basis-point rise in the interest rate premium, there was no considerable interest sensitive capital inflow during the weeks following the rise in the interest rate, due partly to international developments. The period up to November in 2000 Q4 was marked by deterioration in global investor sentiment about riskier instruments (such as emerging-market securities). Foreign demand for forint investments and the forint's interest rate premium *(see Chart II-4)* were also reduced by a temporary rise in euro yields taking place in the period from mid-October to early November.

While August witnessed robust demand for forint conversion, global capital market developments during the period beginning in September exerted downward pressure on the demand for conversion. The exchange rate of the forint broke away from the strong edge of the trading band and remained inside the band, at about 30–40 basis points from the edge, throughout the period except for a few days. Not even the rise in the interest rate pre-

mium in the aftermath of the central bank's interest rate hike made the exchange rate return to the strong edge *(see Chart II-5)*.

The rise in central bank and market interest rates also fed through to commercial bank rates in the course of October. Transmission was fastest and most efficient in respect of corporate sector lending rates, whereas the pass-through by commercial banks of market-rate rises to household deposit rates seems to be smoothed over a longer period of time. Although households' financial saving rate was significantly higher in the third quarter than previously, this had only a moderate impact on monetary aggregates, as this increase was primarily due to pension fund contributions, as well as life insurance and equity investments. The rate of real growth in the household component of monetary aggregates followed a downward trend up until August, followed by a slight upturn. In respect of the corporate sector, the previous rising trend in the real growth rate of the narrow money measure M1 reversed during the third quarter, simultaneously with a continued decline in broad money M3. Due partly to the weak investment activity, the second quarter saw the beginning of a shift in corporate saving preferences from time deposits to government securities. The net position of the corporate sector reflected some improvement during the quarter, as a result of a flat volume of borrowing and an increase in financial assets. The trend seen over the past twelve months that the share of corporate sector foreign exchange borrowing from the Hungarian banking system was rising at the expense of direct foreign borrowing continued. In addition, the third quarter also witnessed a slight reversal in the previously falling share of forint funds, which was probably partly due to the fact that the forint's interest rate premium had stabilized at a low, 200–300-basis-point rate.

Chart II-5 **Intraband position of the forint**

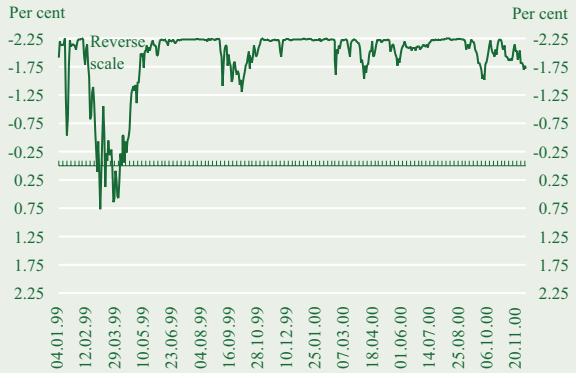
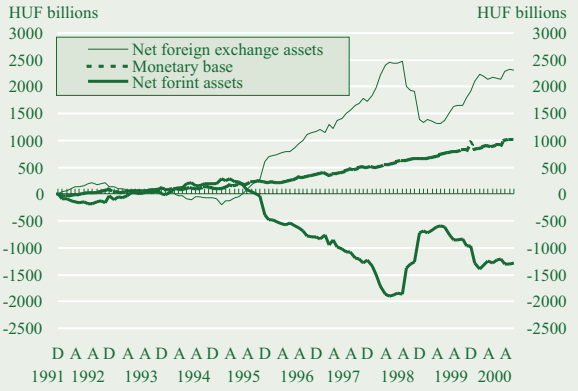


Chart II-6 **Monetary base and its components**



1.1 Monetary base and demand for forint conversion

In contrast to 2000 Q2, the three months to October were characterised by robust growth in the monetary base *(see Table II-1, Chart II-6)*. The 15.7% average quarterly growth was primarily due to the rapid pace of growth in reserve assets, while cash outside the banking sector increased at an unchanged pace. The

Table II-1 **Monetary base**

HUF billions

	2000						
	Opening	March	June	July	August	September	October
I Monetary base (II+III)	1439	1,373.5	1,420.6	1,417.4	1,482.9	1,503.9	1,503.5
Non-bank notes and coin	846.2	762.9	809.6	819	836.8	846.4	846.8
Other notes and coin	109.7	73.4	79.5	76.4	78.7	81	79.4
Reserves	483.1	537.2	531.5	522.1	567.4	576.5	577.3
II Net forint assets (b+c+d-a)	101.1	–248.6	–159.2	–142.9	–241.0	–243.6	–222.7
a) Sterilisation instruments	619.3	884.2	805.7	825.9	899.8	881.5	788.6
of which: NBH bills	0	96.8	235.3	270.4	418.4	470.4	452.6
b) Banking sector loans	120.3	117.1	104.5	103.8	103.4	102.1	99.0
c) Net claims on government	517.9	443.3	454.9	507.1	481	466.2	406.8
Of which:Treasury Account (–)	193.4	267.5	250.1	198.0	216.4	213.1	272.5
Government securities (+)	401.2	393.4	378.8	378.8	371.1	371.1	371.2
Other (+)	310.1	317.4	326.2	326.2	326.3	308.2	308.2
d) Other	82.2	75.2	87.0	72.2	74.5	69.6	60.1
III Net foreign exchange assets	1,337.9	1,622.1	1,579.8	1,560.3	1,723.9	1,747.6	1,726.2
Net foreign	504.4	700.7	73,6.915	748.8	918.3	936.3	988.4
Assets	3,269.1	3,476.6	3,435.6	3,503.0	3,710.1	3,872.3	3,945.6
Liabilities	2,764.7	2,775.9	2,698.7	2,754.2	2,791.8	2,936.1	2,957.2
Net domestic	833.4	921.4	842.9	811.4	805.6	811.4	737.8
Assets	1,550.4	1,569.9	1,452.4	1,443.0	1,398.5	1,408.4	1,338.3
Liabilities	717.0	648.5	609.5	631.5	592.9	597.1	600.4

previously sluggish growth rate of reserves jumped to 21% during August – a result of the July amendment to the reserve requirement rather than the rate of M3 growth. The effective reserve requirement increased during the period under review, thanks to a rise in the funds forming the reserve base. This in turn was due to the fact that the banks' short-term foreign borrowing, on which there has been a 50% reserve requirement since July, continued to increase at a significantly stronger-than-expected pace.

The rise in reserves appeared to slow down to 15.4% in October. In contrast to an upsurge in August, the stock of sterilization instruments decreased by HUF 111 billion to HUF 788 billion by end-October, in line with the capital flows seen in the period August to October. The composition of sterilization instruments during the period reflected a rise in the proportion of the three-month NBH-bills at the expense of the two-week deposit facility, which dropped below 50% during September and October, in accordance with the intentions of the central bank.

1.2 Demand for forint conversion and its components

Following the low demand for forint conversion in 2000 Q2, the third quarter saw an upsurge, amounting to HUF 212.7 billion *(see Table II-2)*. After subdued demand in July, the lion's share of conversion (HUF 159.4 billion) was concentrated in August, which was followed by another slowdown in September. The high level of conversion in August was accounted for by non-interest-rate-sensitive items, as the HUF 45.8-billion surplus on the current account of the balance of payments was coupled with high inflows of foreign direct investment, in contrast to in-

Table II-1 **Components of demand for forint conversion**

HUF billions

	1999 Total	2000					
		Q1	Q2	July	August	September	Q3
A Conversion	**807.6**	**374.0**	**22.6**	15.8	159.4	37.5	**212.7**
a) Intervention in inter-bank foreign exchange market	**708.4**	**374.2**	**20.4**	15.8	159.4	37.5	**212.7**
b) NBH purchases from general government	**99.2**	**–0.2**	**2.2**	0.0	0.0	0.0	**0.0**
Sources of conversion (I+ ...+ IX.)	**807.6**	**374.0**	**22.6**	15.8	159.4	37.5	**212.7**
I Current account balance corrected for net foreign interest payments (1+2)	**–398.5**	**–75.2**	**–107.3**	–5.5	52.9	–70.3	**–23.0**
1 Current account balance	**–497.8**	**–96.9**	**–125.2**	2.1	45.8	–81.2	**–33.3**
2. Net foreign interest payments by NBH*	**99.3**	**21.7**	**17.9**	–7.6	7.0	10.9	**10.3**
II Foreign direct investment	**407.5**	**63.6**	**170.4**	21.0	67.8	9.3	**98.1**
III Intervention due to commercial banks**	**–11.5**	**33.0**	**–15.6**	–17.2	16.1	24.2	**23.0**
IV Effect of derivatives***	**–58.2**	**75.1**	**–41.5**	19.1	–20.2	–2.8	**–3.9**
V Intervention due to domestic foreign exchange deposits	**–1.6**	**–7.4**	**–10.8**	–10.1	–20.0	18.7	**–11.4**
VI Net portfolio investments* (1+2)	**303.6**	**154.0**	**–79.8**	–22.0	12.0	–8.4	**–18.4**
1 Government securities	**152.3**	**142.9**	**6.4**	3.2	34.8	0.0	**38.0**
2 Equity*	**151.3**	**11.1**	**–86.2**	–25.2	–22.8	–8.4	**–56.4**
VII Corporate foreign exchange (1+2) = (a+b)	**237.1**	**11.0**	**88.2**	–1.7	–15.2	62.2	**45.3**
1 Domestic	**154.3**	**77.0**	**120.8**	19.6	50.6	13.2	**83.3**
2 Foreign	**82.7**	**–66.0**	**–32.6**	–21.3	–65.8	49.0	**–38.1**
a) Shorter than one year	**–73.6**	**–32.8**	**–10.2**	0.6	–44.8	–9.1	**–53.2**
b) In excess of one year	**310.7**	**43.7**	**98.4**	–2.3	29.6	71.2	**98.5**
VIII Capital transfers	**8.2**	**3.8**	**14.5**	6.6	9.5	3.6	**19.7**
IX Others	**321.0**	**116.1**	**4.4**	25.7	56.7	1.0	**83.3**
B Interest rate-sensitive (III+IV+V+VI/1+VII)	**318.1**	**254.5**	**26.8**	–6.7	–4.6	102.3	**91.0**
C Speculative	**9.0**	**218.2**	**–60.9**	5.7	–14.2	12.4	**3.9**

* Corrected for the net foreign interest payments of the general government.
** Conversion effect of the change in commercial banks' total open position, i.e. the portion of open positions not hedged by derivative transactions.
*** Conversion effect of the change in forward contracts. With these two items the negative sign indicates the closing of long forint positions built up earlier.

terest-sensitive items, which reflected an outflow. The equity capital outflow which began during the second quarter and which stood in contrast to the previous trend continued into the third quarter, although at a slowing pace. The composition of conversion in September was the opposite of that seen in August. September witnessed strong interest-rate sensitive conversion, which was attributable primarily to corporate loans and the conversion effect of banking activity and domestic foreign exchange deposits. In the meantime, demand for government securities appeared to decline, due broadly to an adverse shift in global investment sentiment about emerging markets. This led to an outflow of portfolio capital in net terms, as the outflow of equity capital was no longer offset by an inflow of foreign investment into government stocks.

Despite strong interest-sensitive demand for forints, the September level of conversion was not exceptional, due to the large deficit on the current account of the balance of payments and the low rate of foreign direct investment.

Box II-3 Foreign exchange market activities of the banking system in the period of September to November

During the period under review, commercial banks reduced their long foreign exchange positions at a steady rate, which is reflected in the decline in their on-balance-sheet open position *(see Chart II-7)*. The banks' weak demand for foreign currency funds entailed a simultaneous drop in their demand for forward-exchange contracts for hedging purposes. Apart from a brief period during the quarter, the size of their total open position was negligible.

The rise in the on-balance-sheet open position seen in August proved to be temporary. There was no noteworthy change in the total open position as its value of HUF 10–20 billion, typical of the period under review, had been already built up at the end of the previous period. The only difference was that this stable net open position was the balance of a visible decline in capital inflow and forward contracts: the on-balance-sheet position fell from HUF 100 billion at the start of the period to HUF 60 billion at the end.

The behaviour of the banks was influenced by mounting financial uncertainty in international markets. Global market funds became more expensive, and there was a weakening of supply. The decreasing on-balance-sheet position *(see Chart II-8)* could be partly due to the fact that the new central bank regulation of open positions, effective as of July, curbed the profitability of speculation aimed at taking advantage of the forint's interest rate difference (*see Box II-2* in September *Report*). Finally, the publication of certain macroeconomic indicators also triggered uncertainty in investors for short periods of time.

Chart II-7 **Open positions of the banking system**

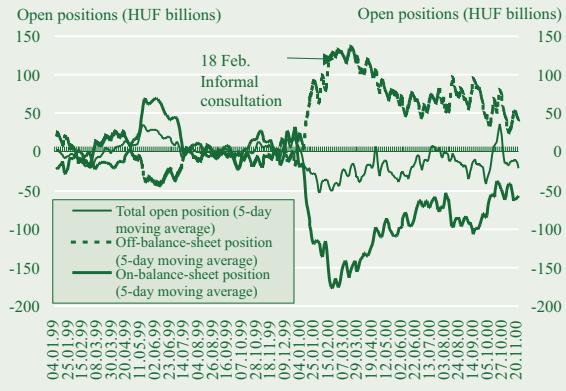
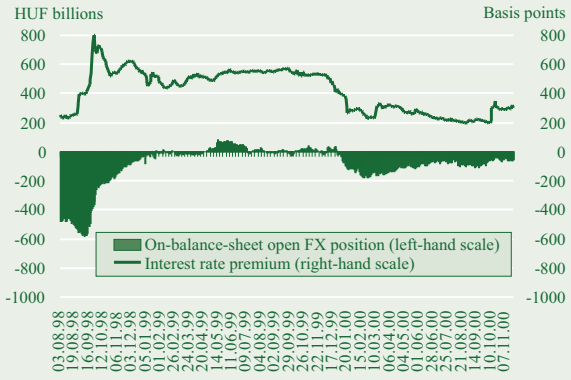


Chart II-8 **On-balance-sheet open FX position of the banking system and the interest rate premium on forint assets**



2 The yield curve, interest rate and inflation expectations

The Bank's September *Report on Inflation* tracked developments on the Hungarian government securities market through the end of August. The three months that have passed since then have witnessed a significant rise in zero coupon yields of all maturities. Compared with the situation in early September, there has been an upward shift of 140–170 basis points in the three-month to five-year section of the yield curve, while at the same time a smaller, roughly 80-basis-point rise occurred at the longest maturity of ten years *(see Chart II-9)*. The rise in yields was not distributed evenly over time: the gradual upward trend at all maturities, starting in mid-August, continued until October 11th. On that day the September rate of inflation was published; the 10.3% year-on-year index was far above expectations. The central bank raised its benchmark rates by 100 basis points on the same day. As a result, October 11th and the following two days witnessed a 90–120-basis-point rise in the section of the yield curve up to the five-year maturity and a 60-basis-point rise at the 10-year maturity. During the period from mid-October, the volatility of yields on government securities increased significantly. The factors to blame for the increased market uncertainty included doubts about the extent of increases in gas prices and its impact on inflation, as well as a few apparently contradictory pieces of news, such as the higher-than-expected rate of inflation in October on the one hand, and Moody's upgrading of the Hungarian foreign exchange debt on the other. From mid-November medium-to-long-term yields began to drop a bit, indicating a fall in long-term inflation expectations.

In the following an outline of the factors contributing to the rise in yields is presented. In contrast to the past, the announcements of CPI inflation rates during this quarter had a decisive impact on yield growth. Every month since July, the published inflation data have exceeded market analysts' expectations, although to varying degrees. The widest divergence between expectations and actual figures was seen in the July and September CPI inflation rates, published on August 11th and October 11th, respectively *(see Chart II-12)*. The inflationary shock in July reversed the downward trend of forint yields, and its announcement set off a slow rise in yields at all maturities *(see Chart II-10)*. The significantly higher-than-expected September rate of inflation, published on October 11th, and the 100-basis-point rise in the official interest rate on the same day, triggered a jump in yields. The inflationary shocks caused market participants to make subsequent upward adjustments in their inflation expectations. According to a Reuters poll of macro analysts, their average expectations about the rate of inflation at the end of 2000 rose by approximately 2.5 percentage points to 10.01% in the period of August to November *(see Chart II-11)*. Long-term expectations about the end of 2001 were also up, although to a smaller, 1.17 percentage point, extent. The November survey put the rate of inflation at the end of 2001 at 7.06%. These figures imply that the bulk of the rise in yields can be explained by rising domestic inflation expectations.

It can be seen that immediately after the July inflationary shock there were no major changes in medium-term inflation ex-

Chart II-9 **Zero-coupon yield curves**

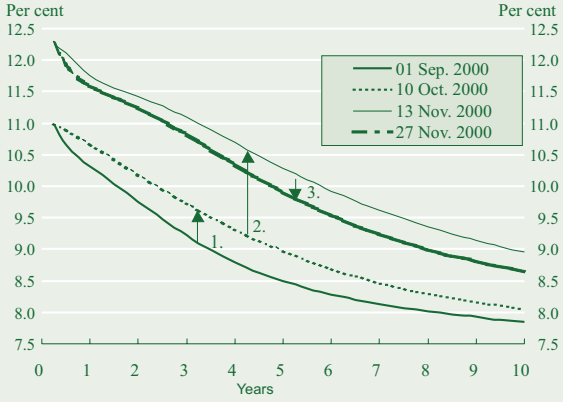
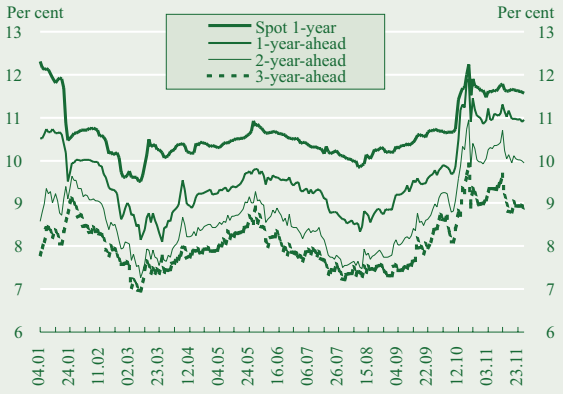


Chart II-10 **One-year spot rate and one-year implied forward rates in one, two and three years' time**



pectations, but the ensuing surprise shocks made market participants increasingly view the rise as persistent rather than temporary. This is reflected in the fact that while the inflation expectations for end-2000 were significantly up in the immediate aftermath of the July shock, the forecast for end-2001 remained virtually unchanged. An analysis of one-year implied forward rates also reveals that while one-year yields expected over the period starting in one or two years' time began to edge up after the July shock, one-year yields for terms beginning in 3 to 5 years' time remained flat and only started to rise after the September publication of another surprisingly high rate of inflation.

Although the underlying factor in yield changes seen over the past quarter was the rise in inflation expectations there were a couple of other factors which also contributed to movements in the yield curve.

In addition to the rise in the expected rate of inflation, there was also a parallel increase in uncertainty about the future rate of inflation, which may have also contributed to the yield rise, exerting upward pressure on the inflation risk premium required by domestic investors.

Changes in yields on the euro, which is regarded as an anchor currency, followed a contradictory course. While the short end of the yield curve rose in conjunction with the two ECB interest rate hikes (25 basis points each, to 4.5% on August 31st, and to 4.75% on October 5th), 3-to-5-year euro yields went down. However, this is only true of the September to November period as a whole. The temporary rise (of 15–20 basis points) in euro yields (at the one-to-three-year maturity) coincided sharply with the period from mid-October to early November which saw a jump in forint yields, triggered by September's significant surprise inflation and the central bank interest rate hike. This was probably caused by the higher-than-expected 2.8% rate of euro-area inflation announced in mid-October. Therefore, the temporary rise in euro yields during the period under review is likely to have contributed to the rise in forint yields on the one hand, and to have slightly reduced the increase in the forint's interest rate premium, generated by the central bank's interest rate rise on the other hand.

In addition to foreign yields, non-Hungarian residents' demand for government securities is also influenced by the expected depreciation of the forint. The September to November period seems to have witnessed no considerable change in this respect. The late-August session of the Central Bank Council made it clear to market participants that, in all likelihood, there would be no cut in the rate of devaluation in 2000. In early October, Ministry of Finance officials indicated that the time was not appropriate for implementing the central bank's proposal to broaden the exchange rate band. As, however, at that time the market did not strongly expect band widening in 2000 or a subsequent appreciation, the depreciation expected over the short term did probably not have a significant impact on forint yields.

In addition to the expected devaluation and foreign yields, domestic yields are also influenced by foreign investors' required risk premium on the forint. The required risk premium partly depends on the current international perception of emerging markets, or more broadly, riskier investments, and partly on the degree of country-specific risk. These components of the risk premium moved in opposing directions during the period under

Chart II-11 **Reuters survey of macro analysts' inflation expectations**

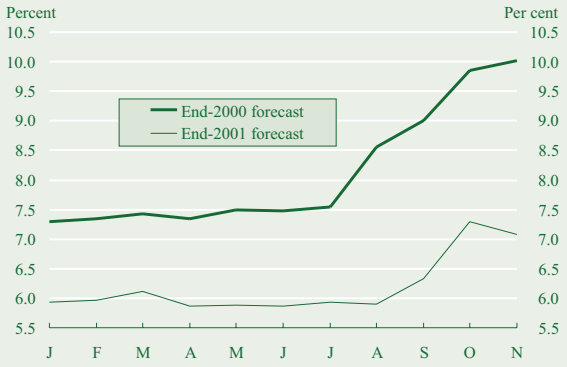
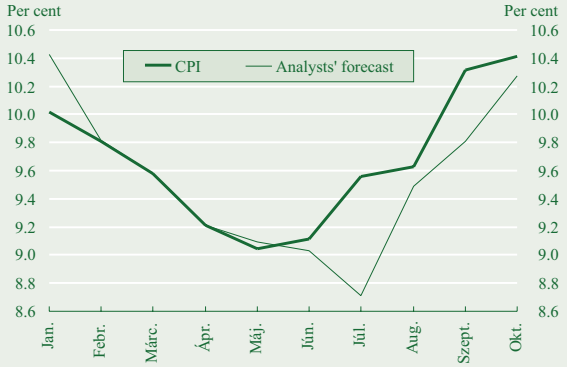


Chart II-12 **Reuters survey of monthly inflation expectations versus actual inflation rates**



review. At the global level, risk taking lost momentum over this period. This was reflected in the sharp rise in spreads on emerging market foreign-exchange bonds after late August, together with another 30% fall in the Nasdaq index of high-risk IT shares, which was reminiscent of the March plunge, and a jump in riskier developed-country corporate-bond spreads. The average spread on Hungarian foreign-exchange government bonds, one of the possible indicators of the perception of country-specific risk, followed a modest upward trend after early September. From mid-October, however, it has definitely, although slowly, decreased.

On November 14th, Moody's gave the Hungarian foreign exchange authority an A3 credit rating. The announcement came as a surprise for the market, as due to several postponements during the year, the upgrading was only expected to take place next year.

The deficit on the current account of the balance of payments, a regularly published macroeconomic indicator with possibly the greatest influence over exchange rate risk, was better than market expectations in terms of both the July and August preliminary deficit published in early September and October, respectively (by contrast, the September deficit, announced at the beginning of November, came as a negative surprise).

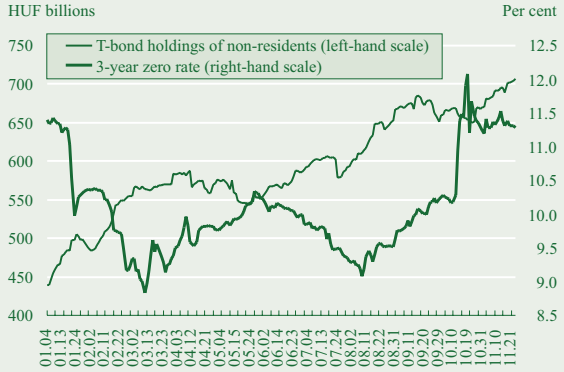
Thus, it is not clear whether the deteriorating global risk factor or on the whole slightly improving country-specific risk factor exerted greater influence on foreign investor sentiment. The increase in foreign residents' government security holdings came to a halt in mid-September, followed by a reversal, which implies that foreign residents' movements were most affected by the adverse global investor sentiment prevalent during this period *(see Chart II-13)*. The interest rate hike of October 11th did not directly trigger a significant amount of interest-rate-sensitive capital inflow. This was primarily because the risk premium required on forint investments also increased as a result of the rise in the level of interest rates and stronger global uncertainty. At the same time, late October saw another pick-up in foreign residents' government security holdings.

This reflected the fact that foreign investors began to regard the considerable rise in forint yields seen in mid-October as stable, and the invariably adverse global perception no longer had an offsetting impact.

In sum, the underlying factor for the significant increase in forint yields seen after mid-August was the rise in inflation expectations and the inflation risk premium, which was up as a result of increased uncertainty about inflation prospects. The sharp rise in forint yields began to induce inflows of capital from end-October, which was dampened by the increase in short-term euro yields and the worsening of global investor sentiment about emerging market risk.

The October 11th announcement of the rate of inflation and the subsequent interest rate hike evoked a strong response from the government securities market. Intriguingly, the rise in medium-term yields at maturities of up to five years did not fall short of the rise in short-term yields, and there was a virtually parallel upward shift in the relevant section of the yield curve, while the rise in 10-year yields was slightly smaller. The implication is that there was indeed deterioration not only in the short-term but also the medium-to-long-term – in other words, the central bank's in-

Chart II-13 **Government security holdings of foreign residents as registered by KELER and the three-year zero coupon rate**



terest rate hike failed to significantly offset the adverse impact of the inflationary shock on medium-to-long term inflation expectations. Nevertheless, it should not be ignored that the unfavourable September inflation figure and the interest rate rise were announced on the same day, thus it is difficult to determine the separate impacts of the two events on the yield curve. It cannot be ruled out that had there been a larger rise in the central bank rate, medium-to-long terms yields would have risen to a smaller extent.

3 Interest rate policy of commercial banks

During the period of August to October, the slow downward trend in bank rates seen over the past few months came to a halt. Undoubtedly, the interruption of the disinflation trend and the central bank's 100-basis-point interest rate rise on October 11th exerted the greatest influence over the developments seen in this period.

Commercial banks responded to the interest rate hike and the resulting upturn in market yields primarily by raising short-term corporate lending rates, up by 90 basis points in October relative to the previous month *(see Chart II-14)*.

The reaction was milder in respect of household deposit rates, which gained a mere 20 basis points during October. Furthermore, small and medium-size banks seem to have reacted more sharply to the rise in central bank and market rates than large banks. The fact that deposit rates increased by less than market yields is well illustrated in the increase in spreads *(see Chart II-15)*.

Household borrowing has been expanding strongly of late, even though annual growth in consumer borrowing, amounting to 79% over the first six months on average, fell to roughly 55% during September and October. Consumer credit for short terms (0-3 months) and over-one-year terms continued to display the fastest growth, with the latter accounting for 82% of total consumer credit. The value of new monthly loan contracts exceeded HUF 52 billion in October, which meant a HUF 8 billion rise in the stock of lending on September. Despite the overall upward trend in interest rates, October saw a slight decrease in consumer credit rates, while the spread between household borrowing and deposit rates as well as the real interest rate on household credit already started to edge down in the second quarter *(see Chart II-16)*. The value of market-based (non-preferential) building and property purchase loans started to rise as of March 2000, with new credit extension in September and October reaching HUF 8.5 and 5.8 billion, respectively, in contrast to a monthly average of HUF 1 billion seen previously. The monthly increase in the stock of this type of lending amounted to HUF 1.5–3 billion over the past six months. Following a 5-percentage-point drop in the market rates on building and property purchase loans during the period from March to July, the downward trend came to a halt *(see Chart II-17)*. As noted in the September *Report*, lending rates fell primarily because competition from centrally subsidised housing loans with preferential rates forced the banks to follow suit with market-based lending rates.

***Chart II-14* Commercial bank rates and market yields**

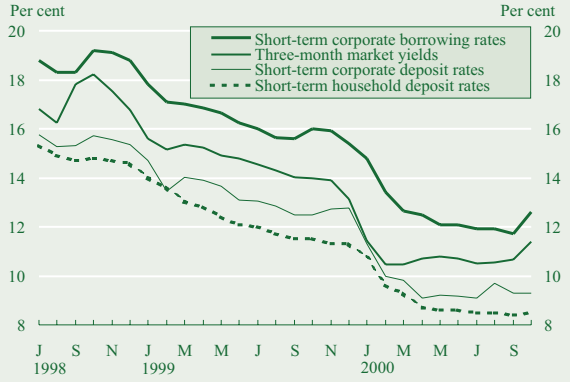


***Chart II-15* Spread between yields on government securities and household deposit rates**

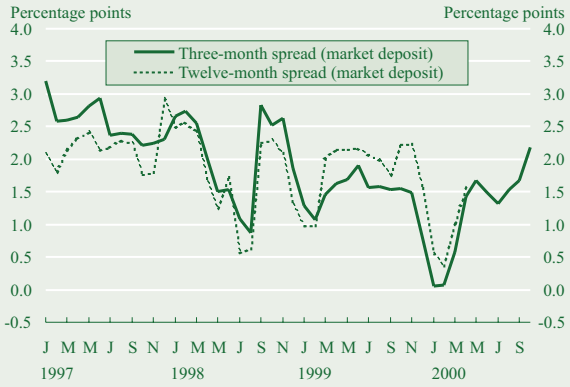


***Chart II-16* Lending to households**

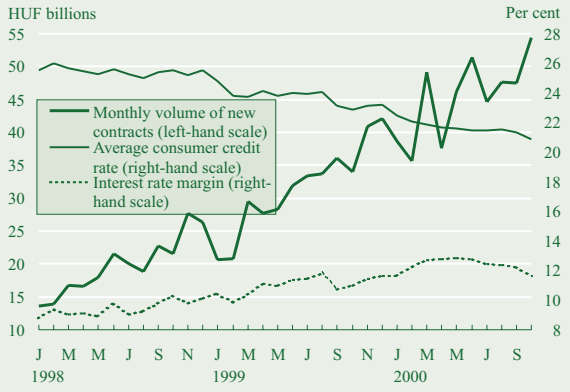


***Chart II-17* Building and property purchase loans**

Chart II-18 Real growth rate of monetary aggregates
Three-month moving average, same month a year ago = 100

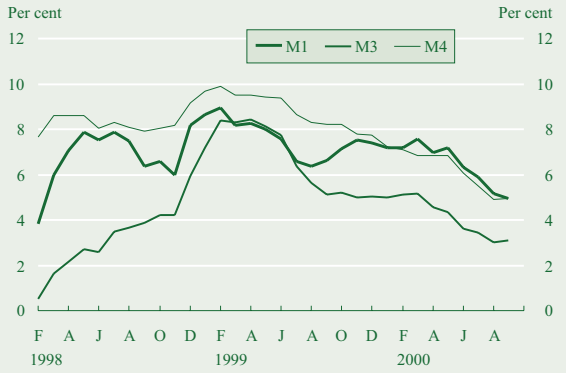


Chart II-19 Real growth rate of M1
Three-month moving average, same month a year ago = 100

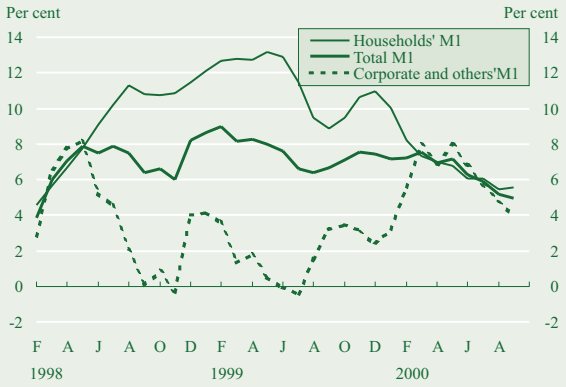


Chart II-20 Real growth rate of M3
Three-month moving average, same month a year ago = 100

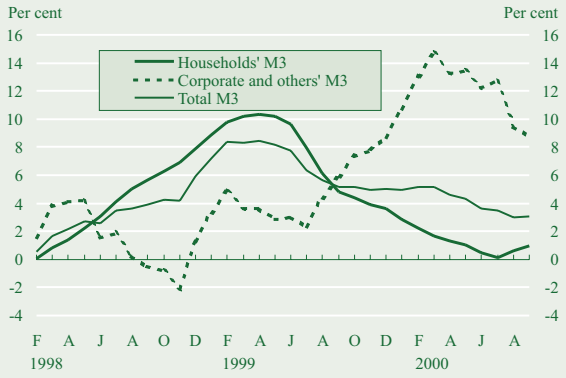
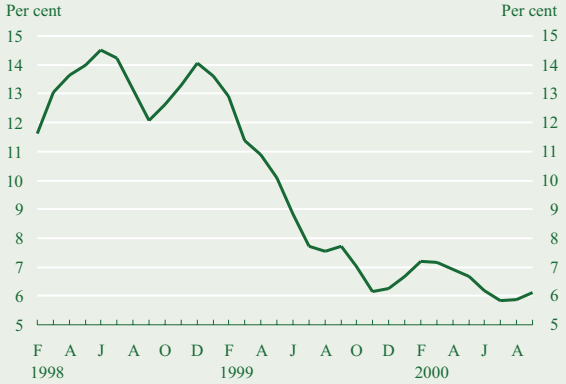


Chart II-21 Real growth rate of households' net financial wealth
Three-month moving average, same month a year ago = 100



4 Monetary aggregates

Slowdown in the real growth of monetary aggregates continued during 2000 Q3, with a slight turnup during September in respect of real M3 and M4 *(see Chart II-18)*.

The underlying factor of the further decrease in real M1 growth is the rising weight in both corporate and household portfolios of medium-term time deposits and assets outside M3, partly at the expense of sight deposits. While apart from the effects of the millennium date change, households' demand for real cash balances has grown at a relatively stable rate, the downward trend in the real growth of households' sight deposits could not be offset by small businesses' fast-increasing sight deposit holdings. This led to a further decline in households' demand for liquid assets. There was a reversal in the upward trend of the corporate component of real M1, due to the fact that companies tended to maintain their assets accumulated probably as a result of postponed investment projects in high-yielding deposit accounts, such as time deposits included with M3 and government securities. Nevertheless, real M1 has grown at a faster pace than the broader monetary aggregates *(see Chart II-19)*.

Real M3 grew at the weakest rate of all aggregate measures of money supply. The household component of broad money grew at a slightly higher rate than inflation during the quarter, due primarily to a fall in the real value of time deposits, which outweighed significant real growth in households' foreign currency deposits. At the end of the quarter, the household component began to expand at a slightly faster pace, exerting upward pressure on the real growth of the aggregate as a whole. During 2000 Q2 and Q3, the corporate component of real M3 grew at a steadily falling rate, despite rapid real growth in non-financial businesses' time deposits, which was offset by weaker growth in corporate real M1 *(see Chart II-20)*.

In addition to weaker M3 growth in real terms, there were two developments that influenced the real expansion of M4, the broadest monetary aggregate, which comprises M3 plus government securities. First, in contrast to weaker growth in the real value of households' government security holdings relative to previous quarters, entailing a further decline in the real growth of M4's household component, the corporate component remained at a high level, thanks to firms' stronger demand for government securities. Developments in the money supply over the period under review point to a rearrangement in both households' and firms' assets towards medium-to-long-term deposit accounts. Households appeared to give preference to assets that fall outside the category of M4 (including shares, life insurance reserves, pension-fund savings), which exerted downward pressure on the real growth of the household components of monetary aggregates. By contrast, the weight of government securities, and to a lesser extent, time deposits, began to increase within corporate sector assets, alongside a drop in the proportion of liquid assets. Thus, companies' real M3 and M4 growth was faster than the rate at which the corporate component of M1 expanded.

The structure of household and corporate sector assets was determined by the real growth in net financial wealth, the alternative cost of the various asset types as well as transactional money demand. Net growth in households' real wealth remained unchanged, at a stable 6% rate during the quarter, ex-

ceeding the real growth in the household components of all the aggregates. This was in evidence of the fact that households boosted their real assets primarily through increasing asset types outside M4 *(see Chart II-21)*. Velocity of circulation indices, characteristic of transactions demand, continued to fall during the quarter, reflecting a rising trend in transactions demand, as in previous quarters *(see Chart II-22)*.

5 Demand for corporate credit

The financing requirement of the non-bank corporate sector declined slightly during 2000 Q3. While the volume of borrowing remained virtually unchanged, the stock of financial assets increased. In the light of significantly lower-than-expected investment spending during the period, it comes as a surprise that there was no considerable improvement in the net position. Provided these low investment figures are correct, this implies that there was a sharp fall in corporate sector profitability and sales, together with a sudden upsurge in the level of inventories. This can partly be explained by slower-than-expected expansion in domestic demand and weaker export demand.

Although the volume of borrowing remained virtually unchanged in 2000 Q3, the last year has been characterised by financial restructuring. Domestic financing began to play an increasingly important role at the expense of external financing. This can be traced back to two underlying trends. First, there was a change in the forint-foreign currency composition of newly obtained funds. Second, there was an upsurge in the proportion of domestic foreign-exchange loans within FX liabilities *(see Charts II-24 and II-25)*. The denomination structure of financing underwent a slight shift towards forint-denominated liabilities, due probably to the fact that the forint's risk premium stabilized in the range of 200 to 300 basis points, down considerably on the 500 basis points a year earlier. This also fed through to corporate borrowing rates, making forint-denominated loans relatively cheaper than foreign-currency financing.

Foreign-currency financing underwent a more marked change in the form of substituting domestic borrowing for foreign loans. As the relative weight of domestic foreign-currency borrowing within corporate financing was previously considerably smaller than that of foreign borrowing, the substitution caused domestic foreign-currency borrowing flows and the stock of lending to rise at an extremely strong rate, relative to low base-period figures. An underlying factor in the pick-up in domestic foreign-currency borrowing is likely to be this year's regulation restricting the commercial banks' on-balance-sheet open positions, which prompted the banks to boost credit extension in foreign currency terms. Adjustment to the new regulation is likely to have caused a one-off shift in the financing structure. Non-financial corporations' financial assets increased during the third quarter, due to robust growth in forint-denominated instruments. As forint assets grew at a faster pace than forint liabilities, there was an improvement in the corporate sector's forint position *(see Chart II-23)*. Within forint-denominated assets, there was a substantial rise in companies' time deposits and government security holdings, which may indicate further postponements in investment.

Chart II-22 **Velocity of M1**
1997 Q1 = 1

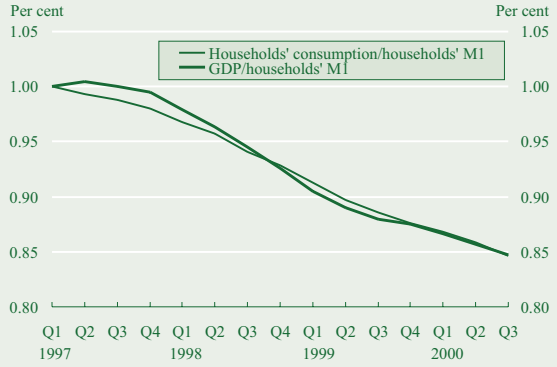


Chart II-23 **Operational quarterly financing requirement of the non-financial sector, as a proportion of GDP**
Seasonally adjusted three-month moving average

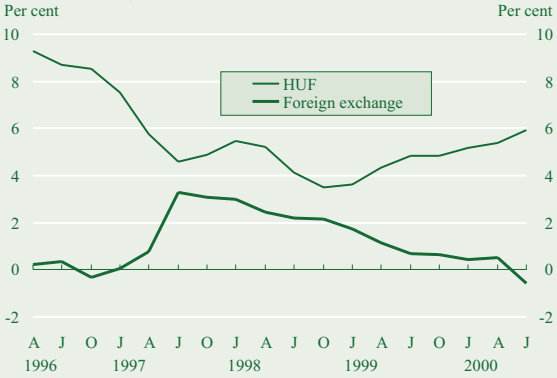


Chart II-24 **Net financing requirement of non-financial companies** Seven-month moving average of seasonally adjusted data, at 1995 prices

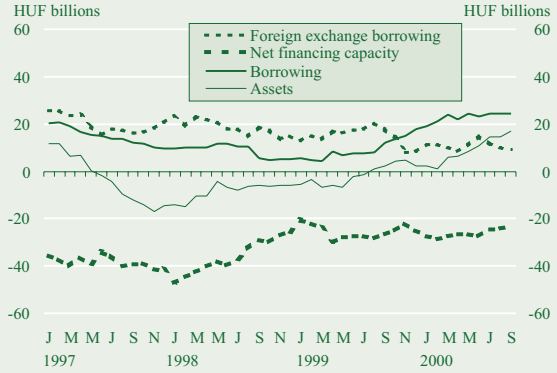
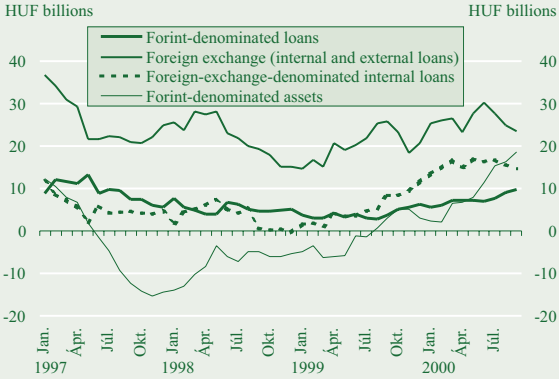


Chart II-25 **Operational borrowing structure of non-financial companies** Seven-month moving average of seasonally adjusted data, at 1995 prices



III. Demand

Chart III-1 **Contribution of domestic absorption and national accounts-based net exports to GDP growth**

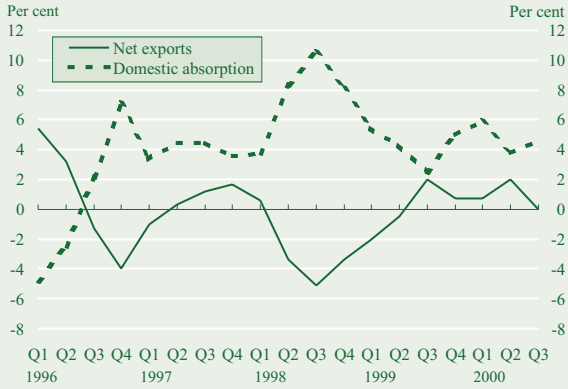


Table III-1 **Annual growth rate of GDP and its components***

Percentage changes on a year earlier

	1999					2000			
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q1–Q3 total
	Preliminary figures published by Central Statistical Office					NBH estimates			
Final consumption	4.3	4.3	4.1	3.6	4.1	3.0	3.2	3.3	3.1
Household consumption	4.5	5.0	4.6	4.4	4.6	3.3	3.5	3.6	3.5
Public consumption	3.2	0.0	1.4	–1.3	0.8	0.9	1.0	1.5	1.1
Gross capital formation**	8.0	3.9	–1.4	7.4	4.4	12.7	4.8	7.5	8.1
Fixed capital formation	5.7	6.1	3.6	7.5	5.9	7.0	5.5	2.2	4.4
Total domestic absorption	5.3	4.2	2.4	4.8	4.2	5.7	3.7	4.5	4.6
Exports	9.5	9.8	13.6	18.9	13.2	21.5	20.9	20.6	21.0
Imports	12.9	10.2	9.3	16.6	12.3	18.9	16.4	20.2	18.5
GDP	3.4	3.8	4.5	5.7	4.4	6.6	5.8	4.6	5.7

* The Bank's quarterly GDP estimates are based on the quarterly GDP data published in April 2000 by the Central Statistical Office on the period 1995–1999. The estimates are consistent with the Bank analyses describing the income positions of individual income holders.
** Includes the statistical discrepancy, represented by the difference between the results of calculations for production and absorption.

Table III-2 **Contribution to GDP growth by individual items of absorption**

Percentage changes on a year earlier

	1999					2000			
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Total
	Preliminary figures published by Central Statistical Office					NBH estimates			
Final consumption	3.2	3.1	3.0	2.6	2.9	2.2	2.3	2.3	2.3
Household consumption	2.9	3.1	2.8	2.7	2.8	2.1	2.2	2.2	2.2
Public consumption	0.3	0.0	0.2	-0.1	0.1	0.1	0.1	0.1	0.1
Gross capital formation*	2.2	1.2	-0.5	2.4	1.4	3.7	1.5	2.3	2.5
Fixed capital formation	0.8	1.3	0.9	2.6	1.4	0.9	1.2	0.6	0.9
Total domestic absorption	5.4	4.3	2.5	5.0	4.3	5.9	3.8	4.6	4.8
Exports	5.0	5.2	7.3	10.1	7.0	11.9	11.7	12.0	11.9
Imports	7.0	5.7	5.3	9.4	6.9	11.2	9.7	12.0	11.0
Net exports	–2.0	–0.5	2.0	0.7	0.1	0.7	2.0	0.0	0.9
GDP	3.4	3.8	4.5	5.7	4.4	6.6	5.8	4.6	5.7

* Includes the statistical discrepancy represented by the difference between the results of calculations for production and absorption.

According to preliminary data, the Hungarian economy grew by 4.6% in 2000 Q3, relative to the same period a year earlier. The driving force behind GDP growth in the third quarter continued to be export growth, but domestic absorption also played an increasing role. The faster rise in domestic demand went hand in hand with vigorous growth in import demand.

The gap between national accounts-based annual export and import growth rates nearly closed, although there was no decline in export growth (with exports and imports up by 20.6% and 20.2% respectively, on a year earlier). At the same time, the terms of trade continued to deteriorate (by over 3 percentage points). As a consequence, national accounts-based net exports played a neutral role in economic growth, while domestic absorption began to contribute strongly (at 4.6 percentage points, *see Chart III-1*).

Of the components of domestic absorption, consumer spending played a neutral role in the expansion of GDP in the third quarter. The volume of household consumption was up 3.6 % on a year earlier *(see Table III-1),* together with a 2.3% rise in operational incomes.

Whole-economy fixed capital formation rose by 2.2% in the third quarter in a year-on-year comparison – a decline compared with the 6% growth rate recorded for the first half. Fixed capital formation contributed to economic growth at a significantly lower rate (0.6 percentage points) in a quarter-on-quarter comparison *(see Table III-2).* There are indications that the expectations of strengthening investment activity have remained unfulfilled, despite the pick-up in external sales opportunities, expanding domestic demand and the favourable financial position of businesses.

Third-quarter growth in the volume of manufacturing investment (accounting for about one-fourth of all investment projects) amounted merely to 1.4%, while average capacity utilisation was relatively high in the sector, together with a steady rise in the proportion of firms reporting capacity shortages relative to expected orders.

As far as material-type services are concerned, overall investment volumes remained flat, while non-material services (such as administration, education, etc.) experienced faster growth, thanks broadly to a pick-up in the investment activity of local authorities.

Stockbuilding, the other major capital formation item, along with other unspecified components of absorption, continued to make a substantial contribution to third-quarter GDP growth. The level of industrial output stocks, which account for some one-fourth of total inventories, expanded at a significantly faster

pace than in the previous quarter.[1] The volume of intermediate goods sold on the domestic market was up by over 10% on a year earlier, which was probably simultaneous with an increase in the level of input stocks. The exceptional rise in intermediate goods imports was one of the factors at work in the rising levels of input stocks.

1 Household consumption

Household consumption in 2000 Q3 continued to follow an upward trend, outstripping income growth, but in contrast to previous quarters, this did not entail a drop in financial savings. Households' overall income increased by 1.9% in real terms in a year-on-year comparison. The key factor in overall income growth was the 3.9% and 2.7% real growth in net earnings and mixed incomes, respectively. The significant increase of benefits in kind in real terms both in year-on-year and quarter-on-quarter comparisons was partly due to one-off wage payments to health care workers, causing a 3.6% rise in volume terms. The drop in real cash benefits (1.9%) was due partly to the fact that pensions rose at a rate lower than the rate of inflation (which is to be compensated for in the fourth quarter), and partly to a decrease in family support payments.

In 2000 Q3, total income growth (1.9%) fell short of operational income growth (2.3%) – i.e. adjusted for the portion of interest income compensating for inflation *(see Table III-3)*.

As households were smoothing their consumption, consumption growth continued to outstrip operational income growth *(see Chart III-2)*. In the third quarter, consumption expanded by 3.6%, in contrast to a 2.3% rise in operational income. Hence, consumption growth again exceeded operational income growth, but the gap has narrowed compared with earlier periods, and in contrast to previous quarters, this discrepancy did not result in a decline in financial savings.

While both consumption and operational income grew at a faster pace than in 2000 Q2, operational income growth was one percentage point up and consumption growth one percentage point down on a year earlier. This was broadly due to individuals' increased caution due to the resurgence of inflation and the fall in the real value of pecuniary social benefits, the source of consumption for low-income strata of households with a high marginal propensity to consume.

The rosy picture of the future created in people's minds as a result of the rise in employment and real incomes achieved by several years of robust economic growth is likely to lead to a continued expansion in consumption in excess of income growth.

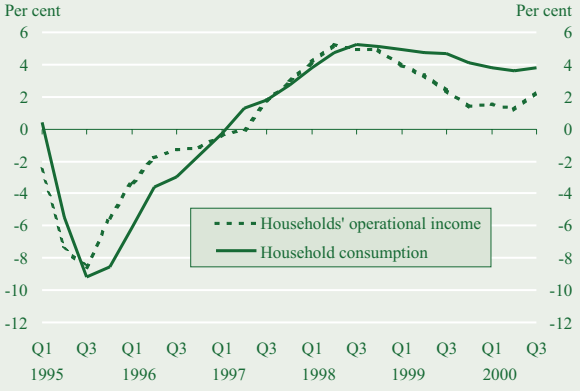
With consumption continuing to grow at a buoyant rate, a third-quarter gross saving rate[2] of 10.7% was recorded, which was broadly unchanged relative to the same period a year ago

Table III-3 **Annual growth of household income and consumption in real terms***
Percentage change on a year earlier

	1999	2000		
		Q1	Q2	Q3
Total income	2.0	1.2	1.5	1.9
Operational income	2.8	0.9	1.4	2.3
Volume of consumption	4.6	3.3	3.5	3.6

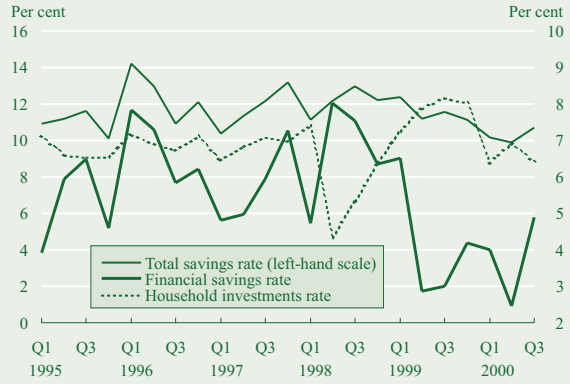
* For an explanation of the correction of 1999 volume data, refer to the note to Table III-1.

Chart III-2 **Real growth rate of household consumption and operational income**
Percentage changes on a year earlier; three-term moving average



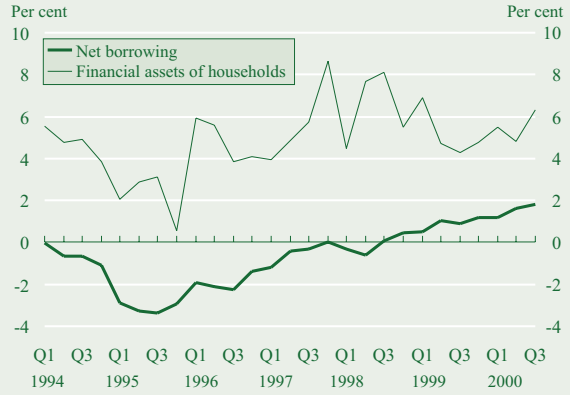
[1] Based on industrial statistics.
[2] All saving rates mentioned in this section are operational categories and seasonally adjusted.

Chart III-3* Changes in the household saving rate and its components



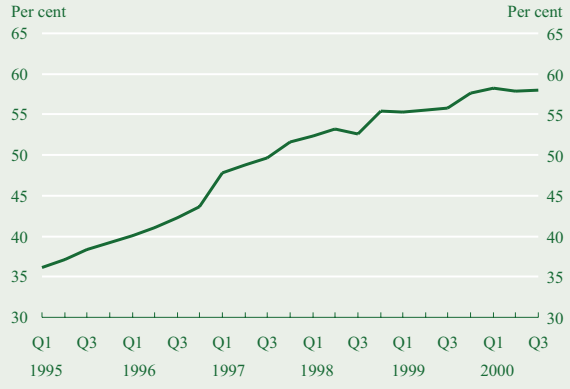
* Seasonally adjusted data as a percentage of operational disposable income.

Chart III-4* Net household borrowing and financial assets



*Seasonally adjusted data as a percentage of operational disposable income.

***Chart III-5* Households' net financial wealth as a percentage of trend disposable income**



(11%), but up on the figure of 9.9% for the previous quarter *(see Chart III-3)*.

However, the composition of gross savings shows major changes. The operational financial saving rate of 4.9% was significantly higher both in a year-on year and quarter-on-quarter comparison (3.3% and 3.1%, respectively), while the 6.4% investment rate was 1.3 percentage points lower in a year-on-year comparison.

In respect of housing construction, the largest item within investment, home building investment as a proportion of operational income stood at 5.2% in 2000 Q3, compared with 4.8% a year earlier and 5.6% in the previous quarter. Although subsidised loan facilities tended to boost home building investment, the strong upswing expected has not yet occurred *(see Chart III-4)*.

The third quarter witnessed vigorous growth in financial savings. Households' inflation-adjusted net financing capacity was up by HUF 111.7 billion, as a result of the stock of financial assets at HUF 155.1 billion and that of loans at HUF 43.4 billion. Households' financial assets were dominated by rises in pension fund contributions (HUF 30.3 billion) and stock market share holdings[3] (HUF 29.4 billion), due to new issues, as well as foreign currency deposits (HUF 12 billion). Savings accounts and deposit accounts continued to be unpopular with households, but the decline seen in the previous quarter (HUF 36.4 billion) was interrupted, and there was even a modest rise of HUF 9 billion. Notes and coin continued to be a substantial item (HUF 35.9 billion). Households remained inactive in the government securities and corporate bond markets *(see Chart III-5)*.

The largest item of households' liabilities, consumer credit, which has appeared to be relatively stable for some time, increased by HUF 22.1 billion during the third quarter, compared with increases of HUF 24 billion a year earlier and HUF 23.6 billion in 2000 Q2.

In addition, loans taken out to finance home building projects and property purchases also expanded at a faster pace (up by HUF 19.1 billion in contrast to the HUF 1 billion drop in a year-on-year comparison, and the HUF 10.3 billion increase of the previous quarter).

The high level of financial savings in the third quarter was brought about by several factors. First, the saving rate was boosted by the portion of large one-off payments left temporarily unspent. Second, higher-than-expected inflation tended to increase the element of caution in households' behaviour. At the same time, households are likely to target a lower saving level against the backdrop of favourable income prospects, which may lead to the stabilization of households' financing capacity at a low level.

Nevertheless, it is also possible that the financing capacity will decline at a slower-than-expected pace. All in all, economic policy makers should monitor these developments and formulate their responses accordingly.

[3] Households subscribed for new share issues worth HUF 19 billion.

2 Investment

In 2000 Q3, whole-economy investment expanded by 2.2% year on year in real terms – a considerable slowdown compared with the similarly weak investment activity seen during the first six months (7% in 2000 Q1 and 5.5% in 2000 Q2). Although one-fourth of total investment projects are scheduled to take place during the fourth quarter, which may considerably modify the annual growth rate in volume terms, the projections of strong investment activity issued at the start of the year are likely to remain unfulfilled.

Expectations of buoyant investment activity also remained unmet during the first half of the year. At that time the weaker-than-expected performance was attributed to the fact that the stronger investment activity seen over the past few years (most notably in 1998) had created such large-scale capacities that would suffice to satisfy the needs of a dynamic rate of production for some time to come. Another assumption was that if the cyclical position remained as favourable in the latter half of the year as during the first six months, then the available capacities would run down, and consequently, stronger investment activity would be encouraged (which companies did indeed have the necessary resources to finance).

In view of the third-quarter investment figures, the above assumptions have remained unjustified, despite the benign external cyclical position and the rise in orders, which could have facilitated stronger investment. Data on industrial output and domestic sales of investment goods, new orders and the persistently high (approximately 80%) rate of capacity utilisation all supported the likelihood of a different outcome. On the other hand, the second-quarter fall in investment goods imports was an indication of contrary developments, i.e. a slowdown in investment growth (although not to such a large extent).

At the moment, only conjectures can be made about the reasons for the poor performance. It may be that corporate decision-makers are already taking into account the projected slowdown in external activity and thus are not inclined to embark on major investment projects at the time being. Instead, they are seeking to make the utmost use of their capacities.

A sectoral breakdown of investment *(see Table III-4)* suggests that the weak third-quarter performance was largely due to a 1.4% rate of manufacturing investment growth, accounting for about one-fourth of total investment. Therefore, in the category of material production, only the construction and electricity sectors increased at a rate above average in volume terms (at 10.8% and 6%, respectively). In other, traditionally weak, sectors (such as agriculture, mining, etc.) investment even fell short of the level for the previous year.

As far as material services are concerned, investment activity remained basically unchanged in real terms during the third quarter, falling considerably behind the approximately 10% volume growth seen in the previous quarter. Only the hotel sector was able to achieve exceptional volume growth at 36%. The only other sectors which were able to expand in real terms were the property transactions and retail sectors (5.6% and 3.7%, respectively). Investment in the transport and communication sector did not expand in real terms, due partly to the sluggish start of the

***Table III-4* Whole-economy investment growth rates**

Per cent

	Distribution in 1999 (%)	1999	2000	
			H1	Q3
Agriculture, hunting and forestry, fishing	3.3	96.7	83.5	92.1
Mining	0.4	149.6	78.4	88.6
Manufacturing	26.1	107.7	104.5	101.4
Electricity, gas, steam and water supply	6.9	103.8	92.1	106.1
Construction	1.9	112.1	106.2	110.8
Material production, total:	*38.7*	*106.5*	*100.5*	*101.9*
Wholesale and retail trade, repair of motor vehicles, motorcycles, personal and household goods	7.5	113.2	106.6	103.7
Hotels and restaurants	1.1	115.7	107.4	134.6
Transport, storage, postal services and communications	17.9	101.9	116.2	94.5
Financial intermediation	2.8	90.5	95.5	97.5
Real estate, renting, business acitivities and housing investment	19.2	111.6	110.4	105.6
Material services, total:	*48.6*	*106.7*	*110.8*	*100.7*
Material production + material services, total:	*87.2*	*106.6*	*105.8*	*101.2*
Public administration and defence, compulsory social security	4.3	127.0	120.7	111.0
Education	2.0	115.9	108.5	108.8
Health and social work	2.1	90.1	107.4	98.8
Other community, social and personal services activities	4.3	95.7	99.6	111.8
Non-material services, total:	*12.8*	*106.4*	*109.3*	*109.0*
Total	**100.0**	**106.6**	**106.1**	**102.2**

Chart III-6 **Changes in fixed investment**
Annualised quarterly growth rates

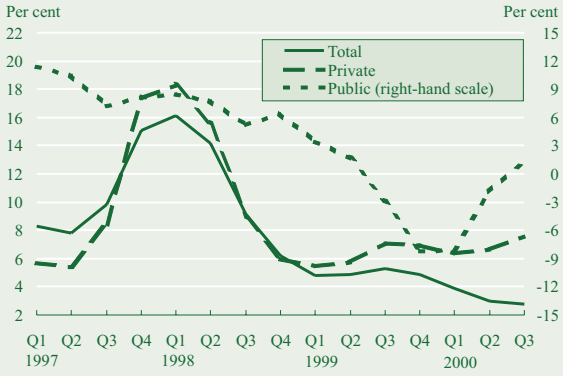


Table III-5 **General government deficit as a percentage of GDP**

	1999				2000		
	Q1	Q2	Q3	Preliminary	Q1	Q2	Q3
1 Central budget balance excluding privatisation	**–8.9**	**–2.6**	**–1.5**	**–2.9**	**–4.3**	**–1.1**	**–0.4**
2 Primary balance (excluding NBH)	1.0	3.0	4.1	3.6	3.0	4.2	4.2
3 Interest balance	–9.6	–6.4	–6.0	–6.7	–7.4	–5.5	–4.8
4 NBH profits and losses	–0.3	0.8	0.3	0.2	0.2	0.2	0.2
5 Balance of segregated funds excl. privatisation	–0.9	–0.1	0.0	–0.4	0.1	–0.1	0.2
6 Balance of Social Security funds excl. privatisation	–2.2	–1.1	–1.2	–1.1	–0.8	–0.8	–0.7
7 Balance of local governments excl. privatisation	1.6	–1.0	0.6	0.0	1.3	–0.7	–0.1
8 Primary balance of local governments	1.4	–1.2	0.4	–0.2	1.1	–0.9	–0.2
9 General government balance excluding privatisation	**–10.5**	**–4.8**	**–2.1**	**–4.4**	**–3.6**	**–2.7**	**–1.0**
10 Out of this: primary balance	–0.7	0.6	3.4	2.0	3.5	2.4	3.5
11 Accrual-based deficit of general government	**–9.5**	**–5.3**	**–3.5**	**–4.6**	**–3.5**	**–3.6**	**–2.0**
12 Accrual-based primary balance	–1.5	0.7	2.7	1.8	2.4	2.0	3.1
13 Deficit correction for financial transactions	0.3	–0.1	–0.1	–0.1	–0.2	–0.2	–0.2
14 Deficit of Privatisation and State Holding Company	–0.3	–0.5	–0.8	–0.8	–0.9	0.0	–0.3
15 SNA financing requirement (15=11+13+14)	**–9.5**	**–5.9**	**–4.4**	**–5.5**	**–4.5**	**–3.9**	**–2.4**
16 SNA primary balance (16=12+13+14)	**–1.5**	**0.1**	**1.8**	**–0.9**	**1.3**	**1.7**	**2.7**
17 Effect of the pension reform	0.5	0.5	0.4	0.5	0.5	0.5	0.5
18 Demand effect (changes in lines 16 and 17)	**1.5**	**–0.5**	**–0.9**	**–0.6**	**–2.9**	**–1.7**	**–1.0**

Table III-6 **VAT in real terms**
Percentage changes on a year earlier

	1999				2000		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Domestic VAT revenues	0.7	1.8	2.9	10.1	18.7	7.5	5.0
Import VAT refund**	8.9	3.2	–0.7	2.4	12.4	5.0	6.9
Net VAT revenues	–9.0	0.7	6.2	17.6	27.7	9.6	3.2

* Adjusted by customs surety.
**Based on estimated accrual-based settlement.

motorway construction project, with similar performance seen in the financial services sector.

Although investment related to property transactions appeared to be rather volatile across the individual quarters, the subdued rate of housing construction activity seems to be turning around. Although it is still difficult to monitor the number of ongoing homebuilding projects, it is clear that the number of issued building permits has been rising uninterruptedly since early 1999 (it increased by nearly 50% in 2000 Q3 in a year-on-year comparison). Therefore, it can be assumed that a significant number of houses and flats are being built, which is not yet reflected in the number of completed homes (which is broadly identical to the figure for a year earlier).

Within non-material services, only health investment fell short of the level seen last year in real terms, with the rest of the sectors achieving a roughly 10% increase in volume terms, which is far above average. Interestingly, while the key sectors of the economy experienced a general decline in investment, non-material services can boast of strong rates of investment, even in terms of combined data from the first three quarters.

In contrast to the previous quarters, the material and technical composition of investment reflects largely identical rates of volume growth in machinery and construction investment projects (2.6 and 2%, respectively). This reflects a marked decline in respect of machinery investment, where the year-on-year volume index has not fallen below 10% over the past two years, except for the 8.5% rate seen in the previous quarter.

In terms of investment with respect to income holders, public sector activity gathered pace as against the previous quarter *(see Chart III-6)*. This was primarily due to investment projects undertaken by local authorities, with the central government making no contribution to growth. The seasonally adjusted data on private sector investment appear to have increased slightly, as a combined result of a minor increase in corporate investment and a higher growth rate in household investment.

3 The fiscal stance

The SNA-based primary balance improved by 1.0% of GDP relative to 1999 Q3, thus the general government restricted demand to this extent *(see Table III-5)*. However, as noted in previous *Inflation Reports*, the developments during the year do not allow any far-reaching conclusions to be drawn. Owing to the annual nature of the budget and the limited extent of seasonality, the financial developments relating to general government can only be reliably analysed in view of all the developments that have taken place throughout the entire year.

The sub-annual timing of a large portion of the receipts and expenditure in the current period differed completely from that seen in the base period. The gap between the primary balances (in other words, the demand effect) appears to be narrowing quarter by quarter, reflecting a more balanced trend in sub-annual developments. The narrowing of the gap in the third quarter was primarily due to the fact that by the third quarter of 1999 VAT revenues had returned to the normal level comparable to that of this year.

As noted earlier, the first half of 1999 witnessed a one-off dip in VAT receipts *(see Table III-6)*. Then, during 1999 Q3, VAT receipts in real terms came broadly in line with the volume of consumption seen both in 1999 and in 2000. However, due to the volatility of VAT refunds, net quarterly VAT revenues grew at a slower pace than last year. VAT refunds are being accounted for in terms of the accruals-based approach as a means of removing distortions. This year the estimation of the accruals concept is being hindered by the many changes affecting the VAT refund system, with special regard to sub-annual timing.

Cash benefits to households in real terms continued to be subdued as a result of the slower-than-expected disinflation. In respect of pension payments, which account for nearly 70% of total transfers, there will be retroactive supplementary payments in the fourth quarter. This measure based on the provisions of the Pension Act is expected to make the inflation-induced loss in the real value of pensions only a temporary effect. The fact that in 1999 pensions were fully adjusted at the beginning of the year accounts for the different seasonality, relative to the base period *(see Table III-7)*.

The rise in the proportion of investment projects within expenditure is a welcome development. Local government investment spending in real terms began to increase during the third quarter. As far as central government expenditure is concerned, as before, most of the increase was focussed on institutional investment spending. The third quarter also witnessed significant increases in priority projects in real terms, but this was not sufficient to offset the decline seen during the first half of the year.

***Table III-7* Selected public expenditures in real terms**
Percentage changes on a year earlier

	1998			1999			2000	
	H1	Q1–Q3	Year	H1	Q1–Q3	Preliminary	H1	Q1–Q3
Pensions (including disability benefits)	5.4	8.4	9.2	6.9	4.3	4.1	–0.9	–1.5
Sick-pay	–4.4	–2.0	0.1	1.7	1.4	2.4	15.6	12.6
Social benefits (central budget)	–1.4	–2.3	–2.8	–1.1	–2.6	0.0	–0.8	–1.7
Social benefits (local authorities)	28.9	30.2	26.1	–0.4	–3.3	–6.0	–10.7	–8.8
Household transfers, total	**4.8**	**6.7**	**7.0**	**4.5**	**2.2**	**2.5**	**–1.1**	**–1.6**
Investment (central budget)	12.6	0.7	–11.2	–12.4	–3.8	4.6	12.5	15.5
Investment (local authorities)	70.9	9.7	10.7	–19.6	–15.2	–11.2	–3.6	3.1
Gross investment expenditure	**40.2**	**5.7**	**–0.3**	**–16.5**	**–10.4**	**–4.4**	**3.6**	**8.7**

* *Source:* Public sector statistics, therefore this differs from CSO figures.
** Using the price indices for public consumption and investment.

***Table III-8* Main macroeconomic indicators in the euro area I**
Percentage change on a year earlier, seasonally adjusted data

	1999				2000		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Real GDP	1.8	2.1	2.5	3.2	3.4	3.7	
Domestic absorption	2.8	3.0	2.9	2.9	2.7	3.1	
Private consumption	2.7	2.7	2.6	2.6	2.4	3.0	
Public consumption	1.4	1.4	1.5	1.5	1.7	1.4	
Gross fixed capital formation	4.0	5.6	5.8	5.6	5.7	4.8	
Stockbuilding*	0.1	–0.1	–0.2	–0.1	–0.3	0.0	
Exports	0.6	2.2	5.7	9.7	12.3	12.8	
Imports	3.5	4.8	7.0	9.0	10.5	11.3	
Net exports*	–0.9	–0.8	–0.3	0.4	0.8	0.7	
New car registration**	6.7	8.5	6.6	–0.1	1.4	0.7	–7.7
Retail sale**	2.6	2.2	2.3	3.0	2.5	3.3	

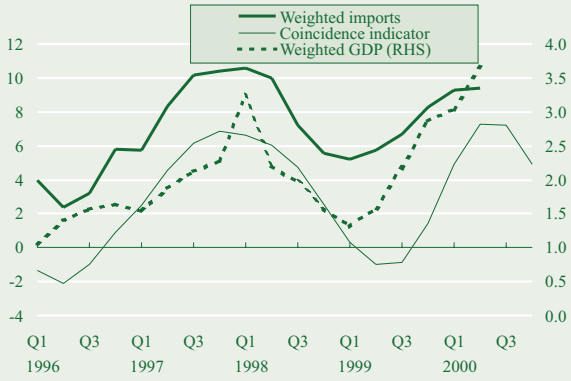
Source: ECB Monthly Bulletin, August 2000.
*Contribution to real GDP in terms of percentage points.
**Seasonally unadjusted data.

***Table III-9* Main macroeconomic indicators in the euro area II**
Percentage change on a year earlier; annualised, seasonally adjusted data

	1999			2000	
	Q2	Q3	Q4	Q1	Q2
Real GDP	2.0	3.6	3.6	3.6	3.6
Domestic absorption	2.0	2.0	3.6	2.8	3.6
Private consumption	1.2	2.8	2.4	3.2	3.6
Public consumption	1.2	1.2	1.6	2.4	0.0
Gross fixed capital formation	5.7	7.8	1.2	7.8	2.0
Stockbuilding*	–0.4	–1.2	1.6	–1.2	1.2
Exports	11.2	15.6	11.7	10.8	13.0
Imports	10.8	10.8	12.1	8.2	13.9
Net exports*	0.4	1.6	0.0	0.8	0.0

** Contribution to real GDP in terms of percentage points.*
Source: ECB Monthly Bulletin, November 2000

***Chart III-7* Foreign demand in Hungary's main export markets**
Percentage change on a year earlier, same period in previous year = 100



4 External demand

External business conditions continued to be buoyant in 2000 Q3. There are some signs, however, that the acceleration of external demand peaked out in the third quarter: (1) the consumer confidence index in the euro area, although still high, fell in the third quarter in a quarter-on-quarter comparison; and (2) the business confidence index remained broadly unchanged relative to the previous quarter. Available data show that euro-area GDP expanded by 3.7% in 2000 Q2, relative to the same period a year earlier, due to a 0.9% quarter-on-quarter growth *(see Tables III-8 and III-9)*.

We use the method described in the June Report to calculate external demand for Hungarian exports in terms of the import and GDP rates of our main trading partners weighted with the Hungarian export structure. In 2000 Q2, the year-on-year rise in this weighted GDP and effective imports stood at 3.7% and 9.4%, respectively. Although no factual data are available for 2000 Q3 and Q4, existing information indicates that external business activity reached its peak this year, as is also reflected by the OECD "coincidence" indicators, derived from the business cycle indices of Hungary's main trading partners *(see Chart III-7)*.

In the second quarter, the CEFTA countries also enjoyed better business conditions, although it is important to note that activity in these countries also tapered off slightly. Poland registered growth of 5.2%, down from 6% in the first quarter. The economy in the Czech Republic seems to have regained its footing after the

***Chart III-8* Balance of trade based on customs statistics in euro terms**

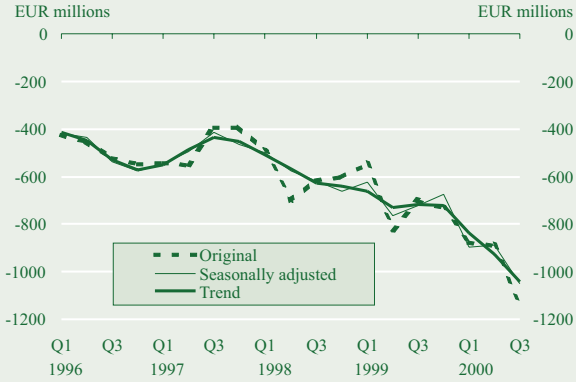


***Chart III-9* Export and import trends based on customs statistics**

Annualised quarterly growth rates in euro terms

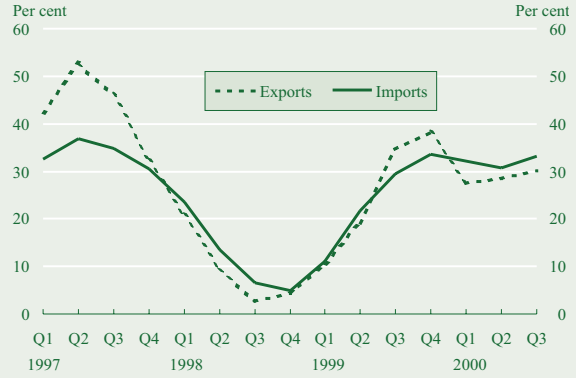
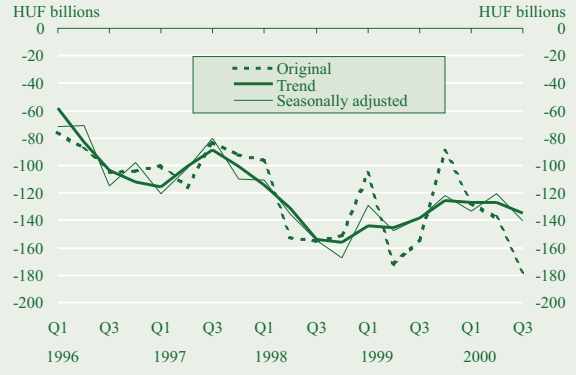


***Chart III-10* Export and import volumes**

Annualised quarterly growth rates

***Chart III-11* Balance of trade based on customs statistics at constant prices**

Forint prices of 1996 Q1



recession, reflected in a recovery of 1.9% in the second quarter. Economic growth in Slovakia rose from 1.5% in the first quarter to 1.9%. Thanks to high world prices for energy and commodities, the economies of CIS countries continued to grow at a robust rate (with a 6.7% increase in Russian GDP during the second quarter).

According to estimates derived from preliminary data, in 2000 Q3, total exports of goods and services rose by 20.6% year on year, with goods and services imports lagging somewhat behind at 20.2%.

The contribution of the GDP balance of trade to growth remained positive, although small. As described below, volume and value data continued to diverge in the third quarter, due broadly to changes in the terms of trade.

In 2000 Q3, customs statistics-based exports and imports amounted to EUR 7,635 million and EUR 8,778 million, respectively. There was a deficit of EUR 1,143 million on the balance of trade, up by EUR 442 million on a year earlier *(see Chart III-8)*.[4] The pick-up in foreign demand was one of the factors boosting export growth in 2000 Q3, with export trend growth rising at an annualised rate of 30% in a quarter-on-quarter comparison. This, however, took place together with rapid growth in trend import values *(see Chart III-9)*.

Seasonally unadjusted import data were characterised by much faster growth than the trends, which was due, we believe, partly to idiosyncratic effects (a few firms' investment goods imports rose temporarily above the customary rate during August[5]). However, the substantial growth in exports was not capable of putting a halt to deficit growth, and the balance of trade deficit based on seasonally adjusted customs statistics continued to worsen during the third quarter. This seems to justify the cautious interpretation presented in the September *Inflation Report*, which attributed the decrease in the seasonally adjusted value of the deficit to a temporary effect. While in value terms, import growth appeared to be more robust than export growth, the volume data does not reflect this difference, and the two variables appeared to rise at virtually the same rate in a quarter-on-quarter comparison *(see Chart III-10)*. As the terms of trade continued to worsen during the third quarter (by 3.1% relative to a year earlier), the difference between the growth rates of export and import volumes was smaller than that reflected by the value data. The deterioration in the terms of trade can be primarily attributed to rises in world prices for energy and commodities, while foodstuffs and manufactured goods enjoyed slightly better terms of trade. The terms of trade relating to machinery remained virtually unchanged.

The improvement in volume indices compared with the value data is also reflected in the balance of trade. While the seasonally adjusted euro balance continued to show a large deficit similarly to previous quarters, the third-quarter balance at constant prices

[4] Only preliminary data are available for the third quarter as the processing of submitted customs declaration forms is a continuous source of new information. As the figures in this Report contain the expected adjustments, the final data may modify the current picture.

[5] In the course of seasonally adjusting the import series, this EUR 200 million amount was regarded as an abnormal observation by our expert estimates.

deteriorated only slightly, following some improvement in the second quarter *(see Chart III-11)*.

The country structure of exports also reflected the changes in external demand. Exports to developed countries continued to expand at an unbroken pace in the third quarter *(see Chart III-12)*.

The growth in exports to CEFTA countries, which started in 1999 Q1, gained further momentum *(see Chart III-13)*. This area experienced the most robust growth in demand for Hungarian exports, with the annual rate (37%) exceeding the rates of exports to both the developed countries (31%) and EU-countries (29%). There was no pick-up in export growth in relation to the CIS countries in the third quarter *(see Chart III-14)*. The high annual growth rates seen previously can be attributed to low base-period values as the Hungarian exports to this area remain clearly flat.[6]

An analysis of the composition of exports *(see Chart III-15)* reveals that durables exports continued to top the list (up by 52.6% on a year earlier).[7] Short-term indices indicate a recovery in investment goods exports. The June *Inflation Report* noted that the quarterly trend of investment goods exports had declined, seemingly in contrast to developments in external demand. However, third-quarter data reflect a turnaround in export rates following the low rates of the first and second quarters. In a year-on-year comparison investment goods exports continued to rise significantly (20.5%).

This implies that the second-quarter developments were due to special factors and probably did not signal the start of a long-term decline. Relative to the previous quarter, the trend in non-durable consumer goods exports slowed to such a great extent that this even fed through to the annual growth rate. The quarter-on-quarter slowdown in the trend of intermediate goods exports excluding energy continued in the third quarter. However, owing to low base-period rates, year-on-year growth remained substantial (at 39.9%).

The SITC breakdown of exports *(see Chart III-17)* shows that, in contrast to the previous quarter, food, beverages and tobacco export growth fell short during the third quarter, a development also reflected in the annual growth rate (6.4%). Machinery exports excelled in terms of annualised trend growth (44.7%) and annual growth (37.4%), thanks to acceleration in the export growth of both investment goods and consumer durables. Manufactured goods were exported at a steadily growing rate (up by 22% on a year earlier). Commodity export growth slowed down to a negligible extent – to 13.8% – in a quarter-on-quarter comparison.

An analysis of the breakdown of imports *(see Chart III-18)* shows that consumer durables imports continued at the rate seen in the second quarter. The quarter-on-quarter annualised decline

Chart III-12 **Exports to developed countries**

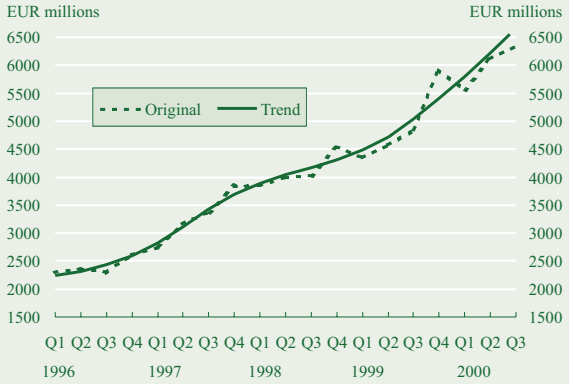


Chart III-13 **Exports to CEFTA**

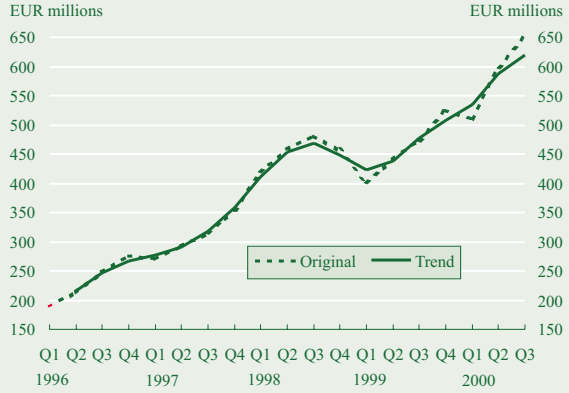
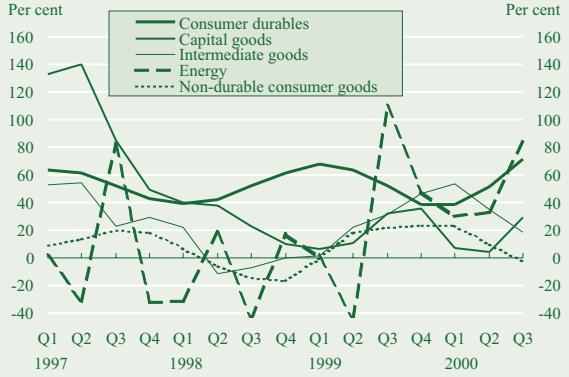


Chart III-14 **Exports to CIS**

Chart III-15 **Annualised trend growth rates in various export categories**

Value index in euro terms



[6] The 31% annual growth rate calculated in dollars switched into a decline of 7.4%. This abrupt change is due to the "exit" of the low 1999 Q2 from the base. Exports to the CIS countries calculated in euros rose by 6.4%. The nearly 14% difference between dollar and euro data was predominantly due to cross exchange rate changes.

[7] In the absence of sufficient data, the analysis of export composition refers to series which do not include the latest corrections.

Chart III-16 **Contribution of various product categories to export trend growth**

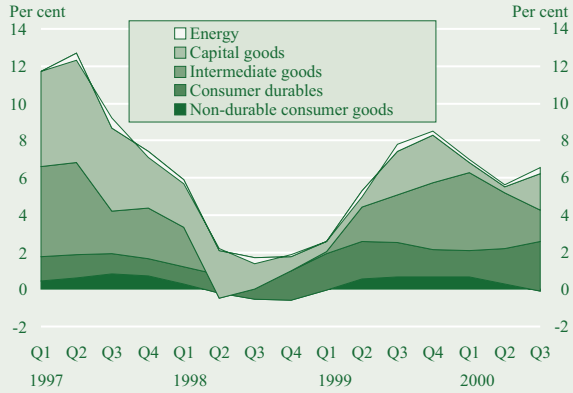


Chart III-17 **Annualised quarterly trend growth rates in the SITC-5 export categories**

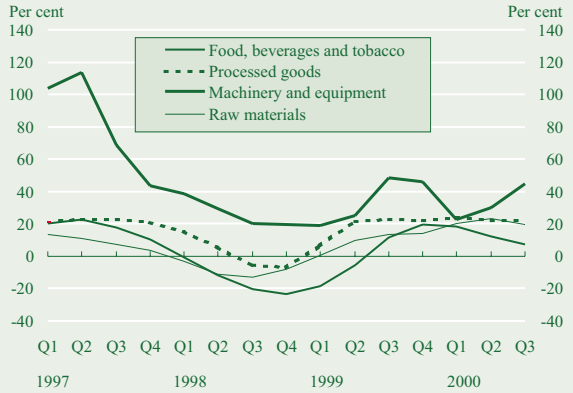


Chart III-18 **Annualised trend growth rates in various import categories**

Value indices in euro terms

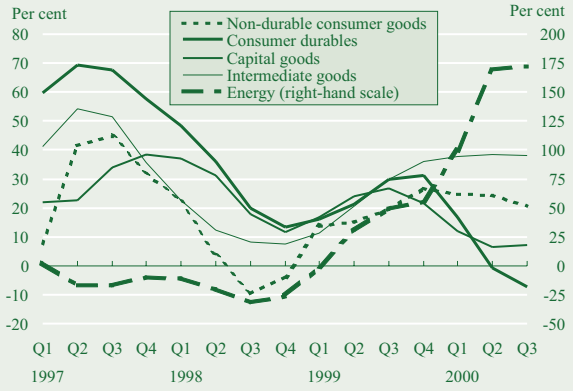
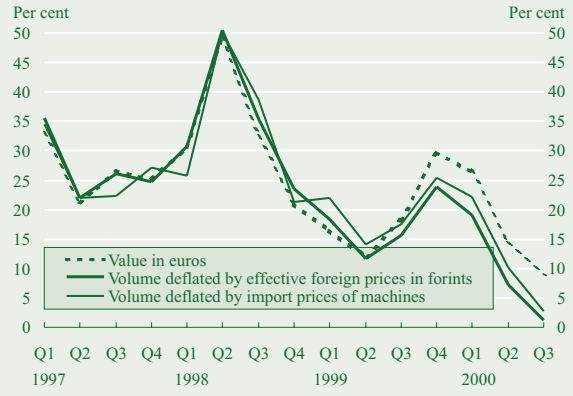


Chart III-19 **Imports of investment goods**

Same period of previous year=100



in this category amounted to 7%.[8] This was not reflected in the annual index, which continued to show a 10.1% rate of growth. This may be associated with the fact that consumption of consumer durables, with special regard to imports, seems to have slowed. Investment goods imports grew basically at the same rate (7.3%) as the previous quarter (in a year-on-year comparison, investment goods were also imported at a lower rate, with 8.8% growth in the third quarter). The slowdown in growth may be associated with the decline in machinery investment seen during the third quarter.

One possible implication is that machinery investment is not likely to pick up during the fourth quarter. Although there are no volume data available for this breakdown, the deflator required for the calculation of such data can be approximated with foreign producer prices in forint terms and the imported machinery price index. The estimated year-on-year import volume of investment goods expanded minimally (by 1.2% and 2.8% in terms of the different indices), due to the rise in import prices and external producer prices. *Chart III-19* shows that the estimated volume of investment goods imports slowed more strongly than the value indices calculated in euro. By contrast, intermediate goods imports did not slow, with growth still exceeding 38%. This is due, in all likelihood, to robust industrial production and the associated strong demand for imports, arising primarily from the robust export growth rate. Non-durable consumer goods imports stabilized at a rate outstripping that of consumer durables (up by 24.6% on a year earlier). The over 100% year-on-year rise in energy imports was dramatic as a result of the price rises for energy.

In examining *Chart III-20* for the contribution of the various product categories to import growth, one can see that energy and intermediate goods have come to top the list. This is associated with the energy price rises and the relatively high aggregate output, stronger domestic sales and steady export growth. At the same time the role of the other three categories, particularly that of investment goods, declined markedly.

As in the previous two quarters, the favourable performance of the services category contributed significantly to the improvement of the external balance in the third quarter. The services balance on the balance of payments amounted to EUR 749 million, with the surplus up EUR 158 million on 1999 Q3. The seasonally adjusted figure was slightly better than in the previous quarter, predominantly due to the increase in the travel surplus.

The travel balance in 2000 Q3 recorded a surplus of EUR 907 million as a result of receipts of EUR 1,221 million and expenditures of EUR 314 million, an increase of EUR 147 million on a year earlier *(see Charts III-21 and III-22)*. The seasonally adjusted increase in the travel balance, slightly surpassed the second-quarter performance, gathering further momentum during 2000 Q3. In a year-on-year comparison, the euro value index rose by nearly 26%, while in terms of annualised quarter-on-quarter indices it went up by 11%.

[8] In the absence of sufficient data, the analysis of import composition refers to series which do not include the latest corrections

According to our estimates, the volume growth of receipts was slower than growth in value data, up 6.6% in a year-on-year comparison. Travel statistics also reflect a pick-up in tourism. Although in contrast to a 20% growth rate in 2000 Q2, the number of tourist arrivals rose by merely 1% during the third quarter, the growth rate over the first nine months amounted to 6%, following years of decline. This year the number of tourist arrivals from the European Union rose for the first time (by 2.7%), while there was an upsurge of over 20% in the number of visitors from countries of Eastern Europe and outside Europe. The number of tourist nights spent in public accommodation units rose by 4%, relative to a year earlier.

Despite the 2 % drop in the third quarter, the number of Hungarians travelling abroad rose by 2.5% during the course of the first nine months. In the analysis of both inward and outward tourism, the base-period effect should be taken account of. In 1999 Q2, travel rates plunged due to the Yugoslav war, while the third quarter, following the end of the war, saw an upsurge.

The services balance excluding travel continued to improve in the third quarter, although at a slower pace than previously *(see Chart III-23)*. EUR 774 million on the credit side and EUR 935 million on the debit side resulted in a deficit of EUR 157 million, a slight improvement on 1999 Q3. As in the previous quarters, the improvement was brought about by growing receipts in addition to flat expenditure levels in terms of seasonally adjusted data. The euro-based, quarter-on-quarter annualised value index rose by 40% in respect of receipts and over 20% in respect of expenditure *(see Chart III-24)*.

A close look at the performance of the different services reveals signs of long-term improvement in the area of construction and installation, thanks to a cutback on costs together with a weaker rate of investment. All in all, the services balance continued to improve during the third quarter, going hand in hand with stronger external demand and a pick-up in goods exports.

Chart III-20 **Contribution of various product categories to import trend growth**

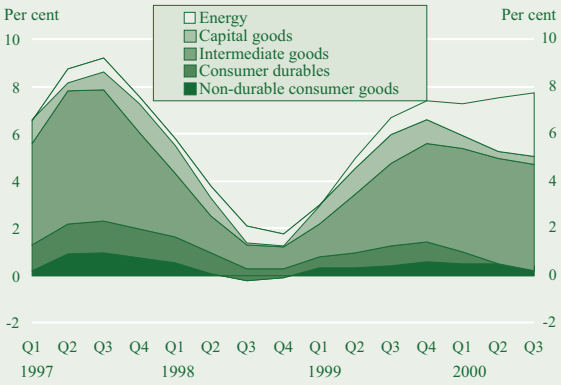


Chart III-21 **Travel balance**

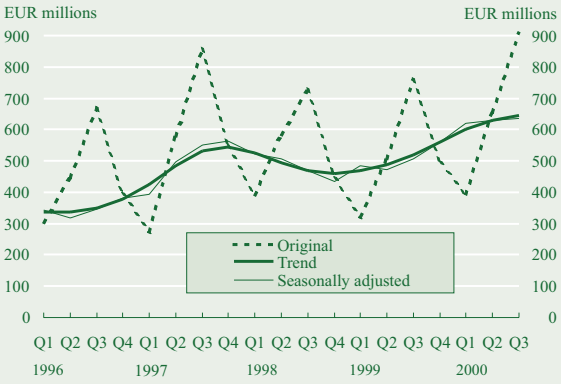


Chart III-22 **Trend of travel receipts and expenditures**

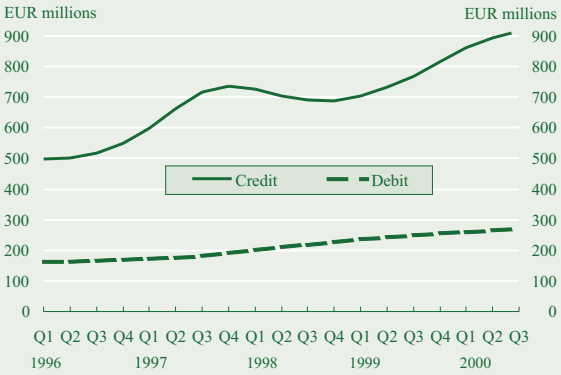


Chart III-23 **Balance of other services**

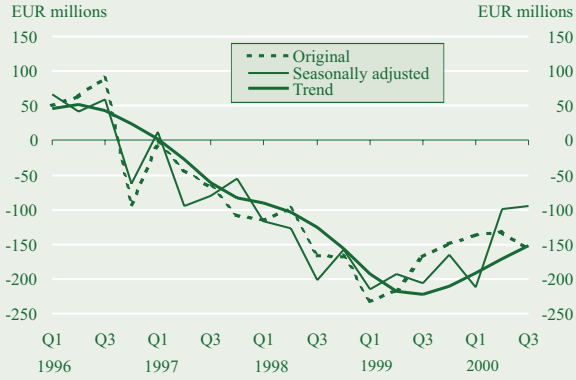
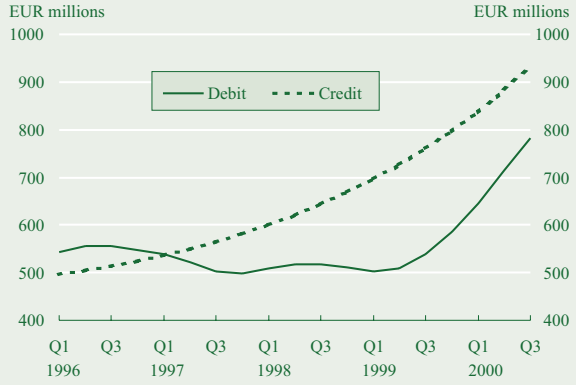


Chart III-24 **Receipt and expenditure trends of other services**



IV. Supply

1 Labour market

Two noteworthy developments occurred in the third quarter of 2000. First, *real indicators* pointed to the continuation of the previous trend. The 1.3% increase in private sector *employment* pushed the participation rate over 50%, and the simultaneous rise in the number of hours worked reflects steady, broad-based growth in the use of labour. At the same time, the rate of unemployment falling to 6% and the lowest *layoff rate* of recent years, together with a rise in the *average number of hours worked*, especially in manufacturing, points to a tightening in the labour market.

Second, although *nominal* indicators suggest that private sector wage inflation slowed compared with the previous quarter, the third-quarter rate of 13.2% appears to be a sign of nominal adjustment to the higher-than-expected inflation path. Although the 11.9% wage index of the public sector is above the pre-announced rate, this can be largely attributed to wage rises financed by fiscal institutions from their own funds, as well as one-off extra payments to health-care workers.

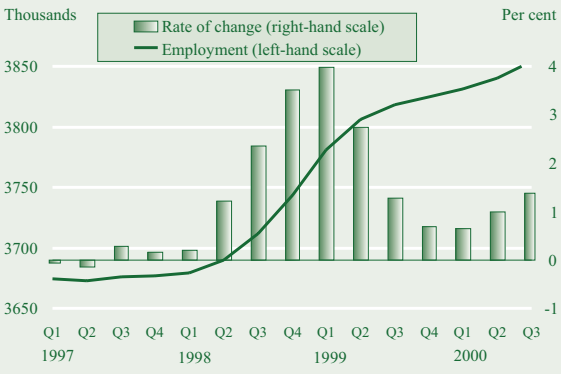
1.1 Labour utilisation

Quantitative changes in labour – the production factor used to produce market goods, such as industrial goods and services, as well as public services – are reflected in changes in the number of employed people, and, even more accurately, in total hours worked *(see Chart IV-1)*.

According to the household labour force survey (LFS) of the Central Statistical Office (CSO), labour market activity continued to be buoyant in 2000 Q3, even strengthening slightly. The *number of employed people* rose by nearly 1.1% in a year-on-year comparison, reflecting a brisk 1.6% rate of annualised[1] growth relative to the previous quarter.

The fact that the rise in the number of employed people varied by sectors reflected the continuation of earlier trends. The household survey implies that the annual rise in the overall number of employed people occurred as a result of pronounced increases in the private sector, with special regard to the market sector (excluding agriculture), and flat-to-falling levels in the public sector. Within the private sector, market services made the strongest

Chart IV-1 **Level of employment and the rate of change***



* *Source:* CSO LFS. Based on seasonally adjusted series. Changes in the number of employed people are always related to the previous quarter.

[1] In order to facilitate comparability with year-on-year indices, month-on-month indices are annualised by raising them by a power of 12, while quarter-on-quarter indices are raised by a power of 4.

contribution to the average growth rate of 1.3%. In terms of the seasonally adjusted sectoral series, *market services,* such as wholesale and retail trade, repair, hotels and restaurants, were the driving force behind the increase.

In respect of certain sectors, such as manufacturing and a number of market services (communications, financial services, etc.) the relevant source of information is the *institutional labour statistics* of the CSO, based on a survey of businesses employing over five people, as small businesses are not typically engaged in such activities. These institutional statistics indicate that the number of people employed in manufacturing continued to increase. Just as last year, the 2.6% year-on-year average rate of growth was the result of an 11% rise in manufacturing, such as machinery and the associated basic metal manufacturing, as well as a roughly 5% rise in the number of *manual* workers (omission of this latter category would lead to a decline in manufacturing employment). The institutional statistics survey also reflects the strong increases reported in the household survey of *market services.* The number of people employed in wholesale and retail trade and repair, as well as real estate and business activities,[2] rose markedly: the annual growth rate of 6–7% remained only slightly below the rate for last year.

It has been noted that *total hours worked* provides a better estimate of the labour cost of economic growth than the number of employed people. Long sectoral data series are only available on the hours worked by the industrial blue-collar labour force. Seasonally adjusted data show that total hours worked rose rapidly, in parallel with the number of employed people – and frequently at an even higher rate *(see below).* The increase in the hours worked in the machinery industry was the primary driving force behind the rise in total manufacturing hours worked;[3] which went from the 1996 low of 240 million to over 260 million in 2000; the hours worked in machinery manufacturing rose by roughly 1.5 times from 60 million, simultaneously with a flat-to-falling rate for the other sectors. (The past two years have also witnessed a rise in the basic metal and the manufacturing sectors as well). Recent quarters have also seen strong increases in the hours worked in these sectors. As data on the hours worked within other areas of the private sector have only been available since 1998, they can only be analysed via simple annual indices. According to the data, labour supplied for the private sector as a whole rose by about 1% from the 849 million hours worked in 1999 Q3. This involved above-average annual growth in blue-collar labour in the sectors of retail and wholesale trade and repair, hotels and restaurants, as well as in white-collar labour in real estate and business activities.

All in all, in accordance with previous tendencies, the amount of labour used by the private sector expanded at a rapid rate. The question is whether this trend will run up against limited supply – in other words, whether the *intensity* of the utilisation of the la-

[2] In addition to real estate activities, this heterogeneous sector comprises a variety of other services, such as those related to renting machinery and other equipment, information technology, research and development, as well as consulting and advertising activities.

[3] These data are recalculated using a statistical method for businesses employing over 5 people for the full period.

bour force can increase further, and whether domestic labour *reserves* are sufficient to support economic growth. The existence of labour market tightening may dampen economic activity, and, typically in the case of market services, may trigger a rise in real wages (real labour costs), exerting inflationary pressure.

1.2 Labour reserves and the risk of labour market tightening

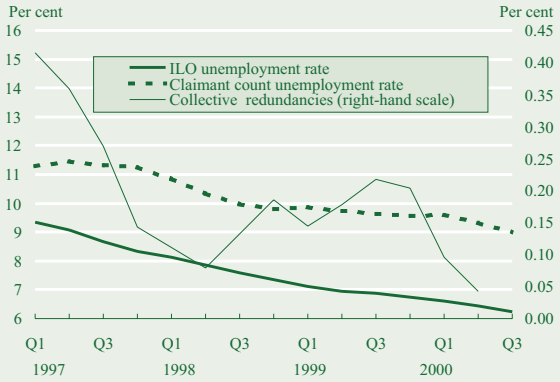
The labour reserves for the extensive expansion of the private sector are to be sought within certain unemployed and inactive groups, as well as, in respect of certain sectors, within the labour force of the public sector. Due to the nature of economic growth in Hungary, *effective* labour reserves primarily consist of highly educated and skilled groups and/or people who have only been out of work for a short period of time. However, by the late nineties, economic growth seems to have absorbed the unemployed and inactive groups that were easy to reactivate. This necessitates an analysis of the possibility of labour market bottlenecks emerging. Such an analysis can be conducted partly by measuring the *level of available labour reserves* and partly by studying the *intensity* of labour utilisation.

The utilisation of the capacity provided by the total domestic labour force can be described using several indicators. First and foremost, the economic activity or participation rate is frequently used as an indicator of potential labour supply, showing the portion of the 15–74 age group that are part of the labour market, either as employed or unemployed people. Employment growth and the decline in inactivity have taken place simultaneously with a decline in this age group, causing this indicator to rise to 53.5% during the third quarter, still far below the initial levels seen in 1993 or those in more advanced economies. As noted above this does not imply the existence of voluminous labour reserves, as not each and every inactive or even unemployed group can be regarded as part of *effective* labour supply.

The *employment rate* is different inasmuch as, being a measure of the employed proportion of the 15–74 age group, it indicates the sum of the unemployed and the inactive as the components of the unutilised labour force. By the third quarter of 2000, employment growth had pushed this rate above 50%, close to the highest value (52.5%) measured since the statistics were introduced in 1992.

Finally, the degree of labour capacity utilisation can be described in terms of the *unemployment rate*, which regards the unemployed only as the reserve force of labour. According to this indicator, derived from the internationally (ILO) compatible LFS of the CSO, the unemployment rate has fallen to 6.2%. The implication is that the utilisation of the potential labour capacity has reached (100 – 6.2) = 93.8%. In a narrower interpretation, only the unemployed group that constitutes *effective* labour supply should be taken into account. However, no detailed data are available on education and skill levels which would be required to separate out *effective* labour supply. One sign of the existence of regional labour market bottlenecks is that the rate of unemployment in the western areas of Hungary, the centre of industrial recovery, has fallen to 4–5%.

***Chart IV-2* Labour reserves: Unemployment rates and the rate of collective redundancies**



* Based on seasonally adjusted series.

In addition to the CSO data, the level of labour reserves can also be measured using supplementary statistics published by the National Labour Centre. Claimant count *unemployment* recorded in the administrative database has been falling steadily, bringing the third-quarter rate of unemployment[4] down to 9%, compared with 10–11% in 1998. As noted earlier,[5] a flow concept may be a better guide to labour market developments than the stock rates. The number of *collective redundancies* could serve as an approximate indicator for the number of people *entering* unemployment. Collective redundancies represent a part of effective labour reserves which, by definition, have only been out of work for a short period of time and are therefore relatively easy to reactivate. At the same time, the administrative nature of the data restricts the scope of inferences that can be drawn. Nevertheless, the tightness of the labour market is reflected in the fact that, as a result of the steady decline seen since late 1999, the ratio of collective redundancies to the number of employed people has dropped to a "historical" low of one-tenth of the initial level seen in 1993 *(see Chart IV-2)*.

As noted above, *public sector* redundancies may add to available effective labour reserves in certain sectors of the economy. The labour force shed off due to the contraction of the public sector labour market could be rechannelled into those private sector services which rely on white-collar labour, requiring at least secondary school education, but no specialised skills. Our data show a continuation in the decline in public sector employment, primarily affecting the *manual* labour force (in contrast to white-collar employment, which seems to be even expanding in certain sectors). Thus, developments in the public sector are not likely to ease labour market tightness in the private sector.

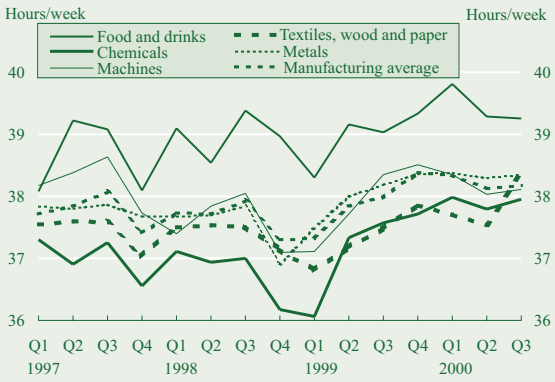
The shrinkage of labour reserves will primarily entail a more intense utilisation of the employed labour force. Wage rises, which pose the threat of cost-push inflation, are likely to ensue only when the first response has run up against 'natural' or regulatory (labour laws) restrictions. The intensity of labour utilisation is measured by average hours worked by each employed person. As noted above, long data series are only available in respect of the manufacturing manual labour force, while data for the private sector as a whole are only available for the post-1998 period. Based on the former source one can say that monthly hours worked by manual workers in manufacturing have risen substantially, by roughly 1 hour on average, since 1993. The current average intensity of 37.4 hours per week appears to be high in international comparison, with only the Czech Republic, known for exceptionally high rate of manual labour hours worked in manufacturing, showing higher figures than Hungary *(see Box IV-1)*.

Developments over the past few quarters have reflected a generally rising trend in average hours worked in key manufacturing sectors since the Russian crisis. Hours worked in the textile, wood and paper industries have surged, which signals restructuring efforts and improvement in efficiency rather than a tight labour market, considering this year's large-scale layoff of manual workers (the textile and clothing industry recorded especially low numbers of average hours worked compared with other countries) *(see Chart IV-3)*.

[4] This rate is the Bank's own calculation, see page 46, 2000 June Report.
[5] Page 42, 2000 September Report.

It has only been possible to record hours worked in *market services since* 1998, in the form of simple annual indices. This sector tends to show a different picture than manufacturing. While in 2000 Q3, the hours each person worked in manufacturing increased relative to a year earlier, market services recorded flat-to-falling numbers. Developments over the past two years reflect no trend-like increase in labour force utilisation (indeed, the monthly and quarterly fluctuations are due to movements in the number of working days). On the other hand, it is a fact that the hours worked in services, especially in trade and repair, were significantly higher than in manufacturing, by 2–3 hours monthly, on average. This implies that in the area of market sector services, entrepreneurs have only limited freedom in intensifying the utilisation of the employed labour force in an attempt to adapt to the relatively tight labour market, due to 'natural' and regulatory restrictions on maximum working hours. Therefore, an acceleration in wage inflation, carrying with it the threat of inflationary pressure, is a more imminent danger here than in manufacturing.

***Chart IV-3* Average weekly hours worked**



* Based on seasonally adjusted data series.

Box IV-1 Hours worked in Hungarian manufacturing in an international comparison

Hours worked is often regarded as a key measure of labour market conditions, giving a better understanding of the relationship between demand and supply and changes therein than the number of employed or unemployed people. This is because entrepreneurs will tend to respond to information on cyclical expectations on the 'intensive margin', i.e. by changing working hours, rather than on the 'extensive margin', i.e. by changing the number of employees. This is especially true of the highly regulated environment of European economies, where the costs of dismissal may be substantial (also incorporated into hiring costs by forward-looking entrepreneurs). Thus, a change in hours worked is one of the key indicators of the cyclical position of many countries. The *level* of hours worked is an interesting measure of capacity utilisation in its own right. However, it is difficult to determine total capacity utilisation, as neither the natural upper limit of 168 hours nor the 'statutory' 40 hours provides much of a clue.

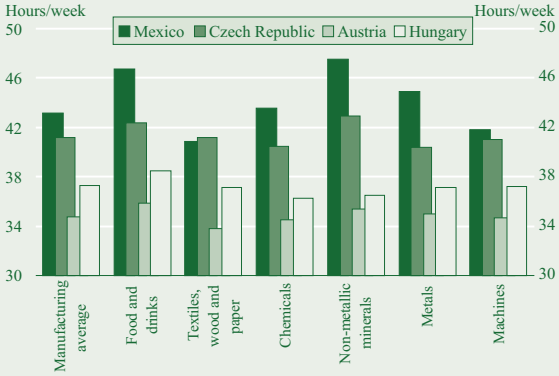
In terms of economic theory, total capacity utilisation could be defined as the level of hours above which there will be a rise in real (hourly) wages or above which wage inflation will begin to accelerate. Theoretically, this level is affected by several factors. An increase in the *capital intensity* of production or statutory *regulation* may reduce the hours worked by boosting real wages or imposing costs on overtime or shift-work patterns, respectively; (regulation relating to dismissal costs will typically affect the intensity of the cyclical movements of the hours worked). Furthermore, social and tax regulations providing for explicit maximum working hours or other type of working conditions, and the market positions of companies will also influence the 'equilibrium' level of the number of hours.

In the absence of a model required for the application of our definition, an international comparison of the hours worked may be a source of information. Hungarian manufacturing hours worked appear to be 'in mid-field' in a *regional* comparison: less advanced countries, such as Russia, Slovakia and Croatia, are characterised by lower hours worked. By contrast, countries with better economic performance, although somewhat less advanced in terms of restructuring, such as the Czech Republic or Slovenia, have higher rates. In a *European* comparison, Hungarian figures (as well as Czech and Slovenian) appear to be high, while most advanced economies have lower (e.g. Austria and Norway) or similar figures (e.g. Belgium, Portugal, Finland). In a sectoral breakdown, despite the strongly rising trend, the number of hours worked in the *machinery* industry fall short of the figures for European countries, together with figures for the chemical industry and non-metal sectors *(see Chart IV-4)*. At the same time, a *global* comparison reveals that a number of emerging countries which have achieved fast industrialisation (e.g. Mexico and Korea) work considerably higher hours than Hungary.

If the level of total capacity utilisation relating to the Hungarian labour force is identified with the highest number of hours worked in the sector in question, it can be seen that the level of hours worked in Hungary is relatively high as there are few European countries with higher levels. It should be considered, however, that Western European countries incur much higher real wage costs than Hungary, due to high capital intensity and welfare regulation; thus the Hungarian 'equilibrium' level of hours worked must be higher. The situation is just the other way round compared with newly industrialized Mexico and Korea. Thus, in Hungarian manufacturing the hours worked representing total capacity utilisation *(see Chart IV-5)* should be seen as lying somewhere in the middle between the figures for Western European countries and emerging economies outside Europe (probably slightly closer to the former).

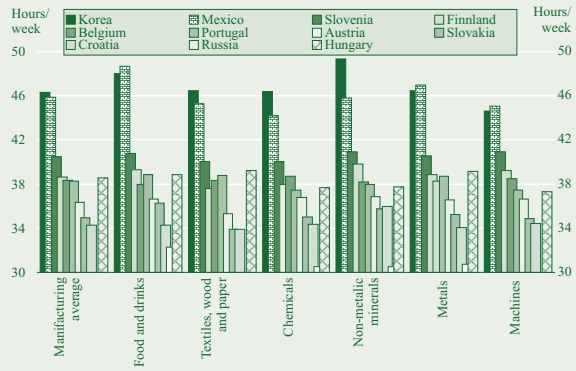
All in all, although high in an international comparison, Hungarian hours worked– which was steadily rising over the late nineties– are probably still below the 'equilibrium' level by several, even 3–4, hours, if technology and price factors are taken into account.

Chart IV-4 **Comparison of weekly hours worked by blue-collar labour force***



* Based on manufacturing data from 1997-98. Data weighted with the Hungarian employment structure of 1999.
Source: ILO

Chart IV-5 **Comparison of weekly hours worked by blue-collar labour force***



* Based on manufacturing data from 1997-98. Data weighted with the Hungarian employment structure of 1999.
Source: ILO

1.3 Wage inflation

The acceleration in wage inflation seen in previous quarters did not continue in 2000 Q3. Thus, the exceptional rates of wage inflation recorded in the second quarter may be regarded as temporary. The 13.2% growth in third-quarter wage inflation in the *private sector* reflects accommodation to slower-than-expected disinflation. The average pace of wage inflation over the first three quarters was similar to that seen last year, as was consumer price inflation. National Bank analysts believe that the fact that nominal wage indices show no decline is serving to stabilize consumers' real wages and is not a sign of the economy 'overheating' or the threat of cost-push inflation. The most pronounced deviation from the general trend in wage inflation was seen in the trade and repair sector. The nature of the difference is discussed below. The public sector's third-quarter wage index was lower than in the private sector. Although at 11.9%, the rate exceeded the average centrally provided rate of 8.5%, this was primarily due to two factors. On the one hand, public-sector institutions have also been enabled in the past by their own funds to give slightly higher wage rises than centrally announced. This is reflected in the sector's wage indices of around 9–10%. This was exceeded by the July wage payments in health-care, accounting for one-fifth of the public sector, which exceeded the usual rate by one third on average. These wages were paid on a one-off basis and were not incorporated into monthly wages. *This extra payment, generating a 62.5% wage rise in July, raised the third-quarter average wage index of the public sector by 2.3 percentage points, instead of 9.6% but for this extra payment.* The third-quarter jump in the public-sector wage index is thus only a temporary development and implies no accommodation of wages to higher-than-expected inflation within the public sector. There were two noteworthy developments in respect of key areas of the private sector. First, there was a substantial narrowing in the difference between the rate of wage inflation in *manufacturing* and that in other *market sector services* (such as hotels and restaurants;

transport, storage, postal services and communications; real estate and business activities; financial services), excluding trade and repair *(see Table IV-1)*. This was partly due to a plunge in services wage inflation and partly to flat-to-rising rates in manufacturing wage inflation. This, however, is not considered to be a cause for concern, against a background of a steady improvement in manufacturing sector competitiveness *(see more on the subject in Section IV/3)*. It should be noted that in contrast to previous quarters, there has recently been an upsurge not only in the blue-collar index, but also in the white-collar wage index. Analysis of the wage *levels* also reveals that in contrast to steadily rising wage levels for the manufacturing blue-collar labour force compared with that of other market sector services, wage inflation for white-collar labour has been flat to falling. This undoubtedly reflects the erosion in the position of white-collar office workers employed in the manufacturing sector in the 1990s. It is possible that the aforementioned process has now come to an end, and that the retention and recruitment of qualified white-collar workers (such as production managers, medium-level managers, etc.) will come to the foreground. This in turn may trigger increases in manufacturing sector white-collar wage inflation against a backdrop of high wage inflation in respect of white-collar labour in services. Further investigation of this issue is in order.

Wage inflation affecting the sector of *other services* fell to a significantly lower level than the 16-18% recorded in the 1998–99 period, reducing the danger of labour market tightening which was pointed out in previous *Reports*. This is especially relevant to the transport, storage, postal services and communications sector, which produced a very high rate of wage inflation last year. It should be noted, however, that wage inflation affecting hotels and restaurants remained at a high rate of over 15%, which may signal the danger of wage inflation caused by strong demand for labour against the backdrop of the above-noted buoyant activity in the sector *(see Chart IV-6)*.

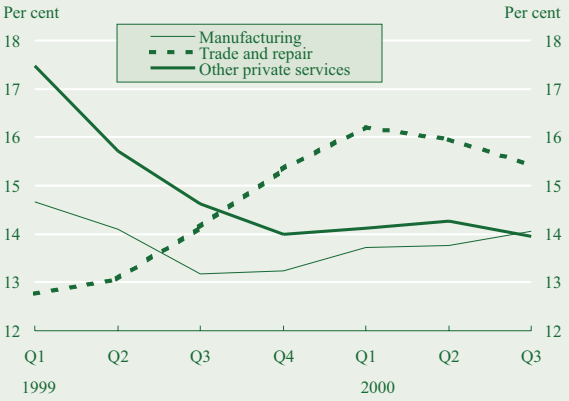
The *retail and wholesale trade and repair* sector does not seem to fit in the picture outlined above: the rapidly accelerating wage inflation reflected in twelve-month indices has remained far above the private sector average throughout this year *(see Chart IV-7)*. Statistical analysis, however, reveals that the sector's wage inflation in fact peaked in 2000 Q1, with the quarter-on-quarter annualised index obtained after the removal of seasonal and calendar effects and the statistical noise amounting to 16% in the first quarter, up from 12–13% last year. However, the upward trend began to taper off during the second and third quarters. This high volatility in the twelve-month indices can be partly attributed to the base-period effect: a comparison of the first quarters of 2000 and 1999 results in an exceptional year-on-year rate as the quarterly wage inflation of the sector was at a low in 1999 Q1. Similarly, although wage inflation slowed down in 2000 Q2 and Q3, the simple twelve-month indices included in the table appear to be high compared with last year's low base-period values.

Looking at the sector's wage inflation from the perspective of economic theory, there are two noteworthy developments. First of all, as noted earlier, there was a surge in the number of people

***Table IV-1* Wage inflation**
Percentage changes on a year earlier[6]

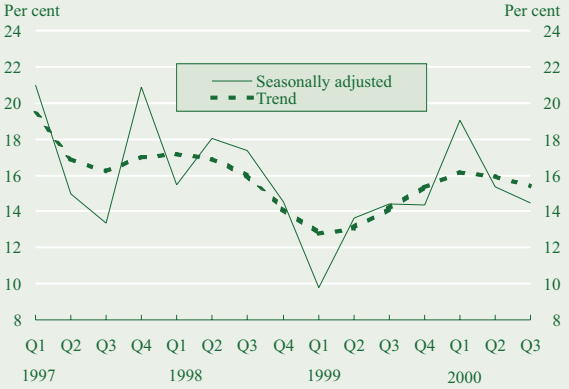
	1999					2000			
	Q1	Q2	Q3	Q1–Q3	Q4	Q1	Q2	Q3	Q1–Q3
Manufacturing	16.2	13.4	13.6	14.4	10.7	11.5	15.1	13.3	**13.3**
Trade	15.4	12.9	12.1	13.5	7.7	15.2	17.5	16.3	**16.4**
Other private sector services	16.8	13.5	15.1	15.1	13.6	11.1	14.9	12.8	**12.9**
Private sector	**16.3**	**13.3**	**13.9**	**14.5**	**11.0**	**11.4**	**15.1**	**13.2**	**13.2**
Public sector	16.1	17.7	16.8	16.9	17.2	12.1	9.7	11.9	**11.2**
Total	**16.3**	**14.6**	**14.8**	**15.2**	**12.9**	**11.6**	**13.4**	**12.8**	**12.6**

Chart IV-6* Wage inflation in the different areas of the private sector
Previous quarter = 100



* Annualised quarterly growth rates based on seasonally adjusted series recalculated for businesses employing over five people.

Chart IV-7* Wage inflation rates in the retail and wholesale trade and repair sector
Previous quarter = 100



* Annualised quarterly growth rates based on seasonally adjusted series recalculated for businesses employing over five people.

[6] The September 2000 Report contained an error in the data for 1999. Please, refer to Table IV-1 of this issue for the correct figures.

Chart IV-8* Average capacity utilisation in manufacturing

* Seasonally adjusted data. Source: Kopint-Datorg.

Chart IV-9* Share of manufacturing firms with a shortage of capacities

* Seasonally adjusted data. Source: Kopint-Datorg.

Chart IV-10* Share of manufacturing firms with a surplus of capacities

*Seasonally adjusted data. Source: Kopint-Datorg.

employed in the sector, simultaneously with an increase in the hours worked by each person. This implies that the large-scale restructuring in the Hungarian retail sector over the past two years, involving the proliferation of large shopping centres and supermarkets,[7] may have run up against tighter labour supply. Second, this rapid restructuring raises doubts about the possibility of measuring the sector's wage inflation i.e. the change in the price of the same unit of work. This is doubtful because the nature and allocation of the work at the new outlets, as well as employee efficiency, have, in all likelihood, undergone major changes, which at least partly explains the 'odd' wage patterns produced by the sector.

2 Capacity utilisation

In 2000 Q3, growth in average capacity utilisation[8] in the manufacturing industry continued in terms of the seasonally adjusted data, although at a significantly slower pace than previously. The Hungarian manufacturing industry enjoyed an exceptionally high rate of capacity utilisation seen only once before over the last ten years, in early 1998, against the background of similarly favourable external sales possibilities *(see Chart IV-8)*. Once again, dynamic output and export growth were the factors at work in achieving such a high level of capacity utilisation in the third quarter. By contrast, investment activity remained weak in the sector. In 2000 Q3, the relationship between technical capacities and prospective demand continued to reflect the trend first seen in mid-1999, reflecting the cyclical position. Excess capacities relative to prospective orders for the coming 12 months declined, parallel to a rise in the proportion of firms reporting a shortage of capacities *(see Charts IV-9 and IV-10)*.

In the third quarter, the proportion of firms projecting insufficient capacities relative to demand over the near term was high in the construction and machine manufacturing industries, predominantly affecting large exporters located in Budapest (and vicinity) and in Western Hungary (Transdanubia). The quality and technological standard of capacities also cause problems for the aforementioned sectors, but above all for firms in North Hungary catering to the domestic market, using domestic capital.

3 Competitiveness

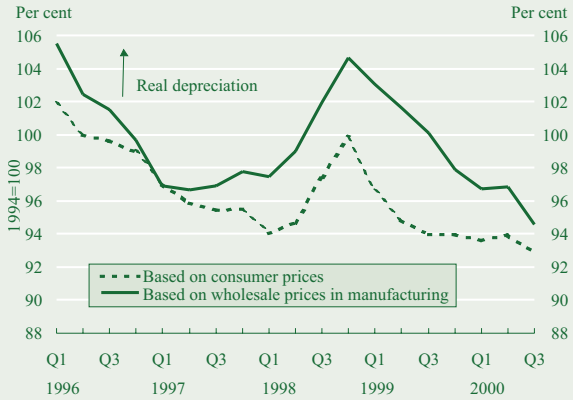
In 2000 Q3, the nominal effective exchange rate index of the forint depreciated by 5.8% on a year earlier, thanks not least to cross exchange rate movements (accounting for roughly 1.5%) conducive to competitiveness. Despite these favourable cross exchange rate movements, price-based indicators continued to be characterised by a trend of real appreciation, which seemed to be accelerating slightly over the third quarter, relative to the be-

[7] According to statistics, in August 2000, the number of companies in the sector employing 50–249 people increased by 49 and the number of those employing over 250 people went up by 2, relative to a year earlier.

[8] The survey used as the source of the above information did not cover a few large multinational companies with manufacturing operations in Hungary - which carry exceptional weight on account of their sales revenues. (The Situation and Short-term Prospects of Manufacturing and Construction Industry Enterprises in July 2000, a quarterly survey of the business cycle, by Kopint-Datorg.)

ginning of the year *(see Chart IV-11)*. The CPI-based real exchange rate appreciated by 2.2%, relative to a year ago, simultaneously with an appreciation of 5.5% in the real exchange rate based on the manufacturing price index. This was again due to the composition effect arising from the different structures of Hungarian and foreign price indices, as noted in previous *Reports* (March 2000, June 2000 and September 2000). Our analyses show that the magnitude of the composition effect was around 2.4% over the course of 2000. Therefore, the manufacturing price-based real exchange rate index, from which the composition effect is removed and which is more correct from both a theoretical and statistical point of view, appreciated by roughly 2.9–3%, instead of 5.3%. The trend of real appreciation can also be clearly seen on the basis of this adjusted indicator, although with a considerably smaller magnitude than that of the main indicator.

***Chart IV-11* Real exchange rates based on the CPI and the manufacturing price index**



Box IV-2 Composition effect within the manufacturing price-based real exchange rate

Clarity and suitability for analysis are crucial criteria which statistical indicators must fulfil. In respect of real exchange rates – which compare domestic and "imaginary composite", so-called effective foreign producers' (consumers') prices and costs – this means that the same concept should be applied when taking account of domestic and foreign producers. The desired real exchange rate indicator based on manufacturing prices seeks to measure, using producers' selling prices, the size of market shares producers can acquire via the price changes (see Kovács (1998)[9]). Obviously, in addition to its own or other domestic producers' prices, an individual producer's decisions will also depend on foreign producers' prices expressed in terms of the domestic currency. Therefore, individual producers' decision making is influenced by their own "real exchange rates". It can be seen thus that the aggregate real exchange rate relating to the economy (or the manufacturing industry) as a whole is derived via weighing together these individual real exchange rates. This means that when deriving the aggregate indicator, the correct theoretical approach is to use an identical system of weights for individual foreign and domestic prices.

This problem is of no particular significance, unless there are considerable differences between the sales structures of the economies being compared. The Hungarian and foreign manufacturing sectors appear to have different structures. This is partly due to methodology discrepancies in the available price indices and partly to the different sectoral composition of the Hungarian and foreign manufacturing industry. As a result of these two effects, the share of the chemical and food industry is considerably higher and that of machine manufacturing is considerably lower than in the foreign price indices. This becomes a problem when there is significant relative price change. In such cases the pronounced rises or falls in a particular sector's relative prices will have a different impact on domestic and foreign indices, even if the degree of relative price change is identical both in Hungary and abroad. An example of this type of relative price change took place in the chemical sector due to rising oil prices seen since early 1999 (see previous *Reports*). Higher-than-average chemical price rises caused the manufacturing-price-based real exchange rate to appreciate more strongly than the indicator corrected for the composition effect. The recent rise in food prices and machine industry prices, growing at a relatively slow pace, introduced a similar distortion into the index.

***Chart IV-12* The original and reweighted real effective exchange rate based on manufacturing wholesale prices**

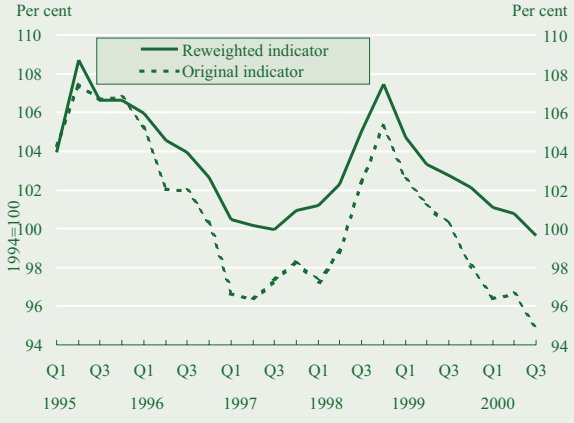


Chart IV-12 shows the traditionally calculated and the composition-effect-free indicators. It can be seen that although the short-term movements in the two indices do not diverge considerably, looking at the average of several years, the index unadjusted for the composition effect tends to be appreciating at a systematically higher rate than the corrected index. The difference between the two indices is approximately one percentage point as an average of one year.

In order to improve the clarity of theoretical and statistical interpretation, from the next Report on, the National Bank of Hungary is adopting the indicator adjusted for the composition effect.

[9] NBH Working Papers.

Chart IV-13 **Real effective exchange rate of the forint based on manufacturing unit labour costs**

The unit labour cost-based indicator depreciated by 3.7% for the year as a whole. Second-quarter production-side GDP data, recently released by the Central Statistical Office, reflect slower improvement over the previous two quarters than that noted in previous *Reports* (4.3%, compared with 6.2% noted earlier). The recent GDP data suggest that growth in domestic unit labour costs accelerated during 2000. While the rate of productivity growth has been steadily declining since 2000 Q1, nominal wage growth remained virtually unchanged during the year, thanks primarily to the fact that annual inflation expectations did not fall.[10] The increasingly faster growth of unit labour costs was, however, offset by a faster depreciation of the nominal effective exchange rate index, due to favourable cross exchange rate effects. All in all, the unit labour cost-based real exchange rate index has been depreciating during the course of the year at a steady, although slightly lower-than-estimated, rate *(see Chart IV-13)*.

[10] It should be noted that the indicators of competitiveness have been calculated relying on the uncorrected manufacturing wage indices provided by the CSO. The main methodology reason for this is that the calculation of unit labour costs does not require a correction for working hours since the hours worked are represented both in the wage cost and the productivity indices. Due to corrections arising from the applied methodology, the manufacturing wage data analysed here are not identical to the indices computed in the section on the labour market.

V. External equilibrium

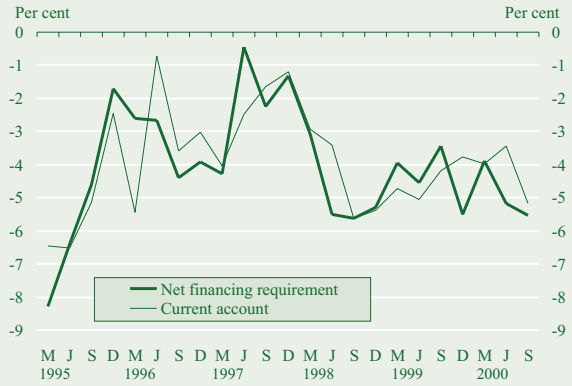
1 Net saving position

Persistently high world prices for energy had an adverse impact on Hungary's external balance, and the nominal deficit on the balance of trade recorded within the structure of gross domestic product[1] rose to 2.2% of GDP, as a result of a deterioration in the terms of trade.[2] Developments in 2000 Q3 also reflect the economy's accommodation to external market conditions. The deficit on the balance of trade at constant prices[3] fell by about 0.1%, to 0.9% as a proportion of GDP, in a year-on-year comparison. Export performance was fuelled by stronger foreign demand. The subdued growth of the real-economy use of foreign assets is attributable to the fact that the investment growth rate, which is relatively import intensive, stood 2.4 percentage points below the rate of economic growth, with the expansion in the volume of consumption also only approximating that rate. The favourable demand structure (in terms of equilibrium) seen since mid-1999 did not offset the price losses caused by the worsening in the terms of trade. The trade balance deterioration reached an all-time peak in 2000 Q3,[4] which could not be offset by the Hungarian economy, thus the nominal balance of trade worsened by 1.7 percentage points as a proportion of GDP. The adverse price structure and the projected stronger growth in investment spending over the near term would imply an increase in external financing. Nevertheless, the actual data and structural changes do not rule out the chance that the rise in external financing will not exceed the sustainable rate, even in the face of stronger investment demand. The justification for such hopes lies in the fact that the increase in the import requirement triggered by stronger domestic demand is likely to be curbed by the high level of imported inventories, which may enable export revenues to grow at a faster pace than imports. Another factor pointing to this scenario is that Hungary's main trading partners still enjoy buoyant, though somewhat slowing, business activity. However, the condition for any improvement in Hungarian prospects is that the deterioration in the terms of trade, which is worsening equilib-

[1] Exports and imports as recorded in the National Accounts.
[2] In this section 1/V, the base period used for the analysis is the same quarter of a year earlier as a means of removing seasonal effects.
[3] Values calculated at 1995 constant prices, reflecting changes in the volume index of GDP.
[4] Divergence between the growth rates of export and import prices ('–' values reflect a deterioration in the terms of trade):

1999 Q3	1999 Q4	2000 Q1	2000 Q2	2000 Q3
–1,6	–2,0	–2,3	–2,8	–3,2

Chart V-1 **Seasonally adjusted net financing requirement and current account deficit as a percentage of GDP***



* Net financing requirement denotes the saving – investment balance of the economy adjusted for inflation, which in turn defines a theoretical current account balance.[7]

rium, moderates. Further worsening would raise the need for government policy response to help restore equilibrium.

Against the backdrop of a nominal deterioration in the balance[5] of trade, the third quarter saw a rise in profit repatriation through foreign residents' current transfers,[6] as a natural consequence of the steady rise in foreign ownership shares. The combined increase in the trade balance deficit and the net profit outflow (1.7%+1.0%) raised the country's net financing requirement to roughly 3.4% of GDP. This deterioration even interrupted the formerly falling trend in the deficit on the current account of the balance of payments *(see Chart V-1)*.

The shift in the distribution of disposable income[8] among agents relative to 1999 continues to be an active factor. The main difference seems to lie in the timing of distribution. In the first half of 1999, government receipts fell short of the projected level, simultaneously with unscheduled budgetary expenses, putting temporary upward pressure on private sector[9] income. The second half of the year was characterised by correction and tightening. The timing of the income distribution in 2000 has been similar to that seen in previous years, but in the third quarter, there was a further increase in the disposable income of the general government *(see Table V-1)*. This is because budgetary revenues this year have outstripped expectations, due partly to robust economic growth in addition to more stringent tax regulations and partly to higher-than-expected inflation, which was followed by expenditure changes only after a lag. Due to these effects, data on one single quarter do not enable far-reaching conclusions to be drawn about changes in the income position of the various sectors of the economy. This is not possible because the general

[5] Balance of trade based on the structure of GDP.

[6] Within foreign current transfer payments, the external balance was worsened by both profit repatriation and unrequited transfers. The GDP-proportional deficit on the net foreign market transfer balance peaked relative to the same periods in previous years.

[7] The discrepancy between the published and the theoretical current account of the balance of payments stems from the fact that the Hungarian balance of payments statistics are still based on the cash-flow concept. This implies that they ignore transactions between Hungarian residents and foreign residents where there are no money flows involved. Furthermore, it may also occur that money flows that can be seen as revaluation in terms of economic theory are recorded as transactions. Another factor to blame for the discrepancy is that there may be a timing difference between real transactions and payment flows. The smaller the measured interval, the larger the relative discrepancy, i.e. the size of the difference between the data measured in terms of the accruals concept and those based on the cash-flow concept, as is illustrated by the quarterly data in the balance of payments current account and the net external financing requirement.

[8] As a change from previous *Inflation Reports,* the Hungarian Privatisation and State Holding Company (ÁPV Rt.) is no longer recorded in the corporate data section, but within the general government data. This is because the APV Rt. is engaged in quasi fiscal operations and is also treated by official (CSO) statistics as part of the general government. (The fact that until now the Bank did not fully rely on the official statistics in the 'savings and investment balances' was due to an absence of sufficient information.) Recently there have emerged other justifications grounded in economic theory in support of the transfer of the APV Rt. Until now, the Agency's operations were much more balanced and its expenditure was funded by its privatisation revenues. With these resources beginning to dry up, the importance of central budget reallocation has strengthened, bringing about major fluctuations in the income positions of the two types of public organizations. This may also conceal the real role of the general government in controlling demand. The consolidated combined balance shows a more balanced impact.

[9] Denoting financial and non-financial companies and households.

Table V-1 **Inflation-adjusted saving and investment by sectors as a percentage of GDP ***

	1998					1999					2000		
	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3
Gross domestic product	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
+ net income transfers	–2.9	–5.4	–3.2	–4.3	–4.0	–2.1	–4.1	–2.6	–4.8	–3.5	–2.1	–5.9	–3.4
+ unrequited transfers	1.7	2.2	2.6	2.2	2.2	1.6	1.9	2.3	2.0	2.0	2.1	2.3	2.1
Disposable income	**98.8**	**96.8**	**99.4**	**97.8**	**98.2**	**99.6**	**97.8**	**99.7**	**97.2**	**98.5**	**100.0**	**96.5**	**98.8**
– households	72.8	69.4	70.9	70.8	70.9	75.3	70.3	70.9	69.9	71.4	74.0	69.1	71.3
– corporate sector	14.7	15.1	16.4	13.3	14.8	16.0	16.9	16.5	10.4	14.8	12.9	15.6	13.6
– public sector	11.3	12.4	12.0	13.7	12.4	8.3	10.6	12.3	16.9	12.3	13.1	11.8	13.8
Final consumption	**75.4**	**71.6**	**71.3**	**71.8**	**72.4**	**77.8**	**73.2**	**72.6**	**71.9**	**73.7**	**77.2**	**72.8**	**73.5**
–household consumption	64.8	61.4	61.3	61.9	62.3	66.6	63.1	63.0	62.5	63.7	66.4	62.9	64.0
–public consumption	10.6	10.2	10.0	9.9	10.2	11.2	10.2	9.6	9.4	10.0	10.8	9.9	9.5
Gross savings**	**23.4**	**25.2**	**28.1**	**26.0**	**25.7**	**21.8**	**24.6**	**27.1**	**25.3**	**24.8**	**22.8**	**23.7**	**25.3**
–households	8.0	8.0	9.6	8.9	8.7	8.7	7.2	7.9	7.4	7.8	7.7	6.1	7.3
–corporate sector	14.7	15.1	16.4	13.3	14.8	16.0	16.9	16.5	10.4	14.8	12.9	15.6	13.6
–public sector	0.7	2.2	2.0	3.8	2.2	–2.9	0.4	2.7	7.5	2.2	2.3	1.9	4.4
Net capital transfers													
–households	0.4	0.3	0.2	0.1	0.2	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.5
–corporate sector	1.0	1.0	1.2	2.2	1.4	0.6	0.9	1.2	2.0	1.2	1.8	1.0	0.9
–public sector	–1.4	–1.3	–1.4	–2.3	–1.6	–1.0	–1.2	–1.5	–2.3	–1.5	–2.1	–1.3	–1.3
Investment	**26.9**	**30.4**	**30.4**	**30.7**	**29.7**	**26.5**	**29.4**	**27.9**	**30.8**	**28.8**	**27.7**	**29.5**	**28.7**
–household investment	5.8	3.1	4.1	3.8	4.2	5.2	5.2	5.8	4.2	5.1	5.6	4.7	4.3
–corporate investment and inventories	18.2	23.3	23.0	22.1	21.7	18.8	21.3	18.7	20.6	19.9	19.5	22.4	20.8
–public investment	2.9	4.0	3.3	4.7	3.8	2.6	2.9	3.3	6.0	3.8	2.6	2.5	3.6
Net foreign financing requirement	**–3.5**	**–5.2**	**–2.3**	**–4.6**	**–3.9**	**–4.7**	**–4.9**	**–0.7**	**–5.5**	**–4.0**	**–4.9**	**–5.9**	**–3.4**
Financing capacity of households	2.6	5.2	5.7	5.2	4.7	3.9	2.2	2.4	3.5	3.0	2.4	1.8	3.4
Corporate sector financing requirement	–2.4	–7.2	–5.3	–6.6	–5.5	–2.1	–3.5	–1.0	–8.2	–3.9	–4.8	–5.8	–6.2
Public sector financing requirement	–3.6	–3.2	–2.7	–3.2	–3.2	–6.5	–3.6	–2.1	–0.8	–3.1	–2.4	–1.9	–0.6

Notes: Bank estimates. Due to rounding, the individual figures do not sum up to the rounded totals.
* Indicators approximate the accruals concept. Savings do not contain forint effects from exchange rate changes on household deposit and credit portfolios. Interest expenditure in the general government balance (GFS deficit less proceeds of privatisation) is presented using the accruals concept.
** Gross saving = disposable income (gross, i.e. including the value for depreciation in the given year) less final consumption. The State Privatisation and Holding Company is part of the public sector. Disposable income includes the sum of the gross domestic product for the given period and the balance of the income transfers and unrequited transfers to non-residents and by non-residents to Hungary (according to balance-of-payments statistics).

government is expected to expand demand during the fourth quarter as a result of an expected rise in current transfer payments and capital transfers, which will entail a rise in the government's financing requirement. For the year as a whole, however, general government will have a demand-contracting impact.

The third quarter saw a rise in households' net financing capacity, at 3.4% as a proportion of GDP, as total spending grew at a slower pace than income. This is partly explained by the base-period effect, as 1999 witnessed a pronounced deterioration in households' net financing position. This was followed by a major shift in saving patterns when households began to reduce their substantial financial savings accumulated in previous years and stepped up their real investments. The relative decline in investment spending as a proportion of GDP seen this year is attributable to high base-period values. The household sector continues to be characterised by a high rate of consumer spending, which tends to expand faster than disposable income. Therefore, when the base-period effect of investment spending wears out and the effect of government subsidies to home building projects kicks in, households' financial savings are likely to decline further over the forthcoming period. The robust growth in household sector borrowing is a sign of the aforementioned process. In addition to real income growth, this trend is also being supported by the development of money markets, which facilitates the restructuring of households' financial assets towards a portfolio marked by a higher debt-to-income ratio.

Corporate profitability continued to follow an upward trend, thanks to buoyant activity, but its rate of growth fell short of that of GDP. The level of companies' own financial assets was affected by a number of temporary and contradictory factors, caus-

Table V-2 **The current account**

EUR millions

	1999 Q2	2000 Q3	Change	1999 Q1–Q3	2000 Q1–Q3	Change
1 Goods	–471	–562	–91	–1,441	–1,500	–59
Credit (exports)	5,134	6,956	1,823	14,565	19,799	5,234
Debt (imports)	5,605	7,518	1,913	16,006	21,299	5,293
2 Services	592	749	158	972	1,527	555
Travel, net	759	907	147	1,588	1,954	366
Other services, net	–168	–157	11	–616	–427	189
3 Incomes	–293	–418	–125	–953	–1,368	–415
On debt, net	–114	–248	–134	–404	–762	–358
On non-debt, net	–179	–171	–8	–553	–608	–56
Wages, net	1	1	0	3	3	–1
4 Current transfers	103	105	2	225	355	130
Current account (1+2+3+4)	**–70**	**–126**	**–56**	**–1,197**	**–986**	**211**

ing their GDP-proportional disposable income to fall 3% below the level for the same period last year. Available data suggest an increase in costs. In addition to the adverse effect of the terms of trade on profitability, nominal wage costs also rose at a faster-than-expected pace. At the same time, rising productivity levels successfully offset most of these extra costs. The third-quarter level of firms' own financial assets were reduced by an increase in current transfers by foreign residents, in addition to restrictive general government policy in respect of the income relations between the government and the corporate sector (due presumably to deferred payments of current and capital transfers during the year). However, this restricting impact seemed to ease somewhat during the third quarter. In the final quarter of 2000, the general government is expected to expand demand. According to Bank estimates, this may cause corporate disposable income to increase at a rate exceeding that of GDP for the remainder of the year (for the year as a whole, this rate may be proportionate with GDP growth).

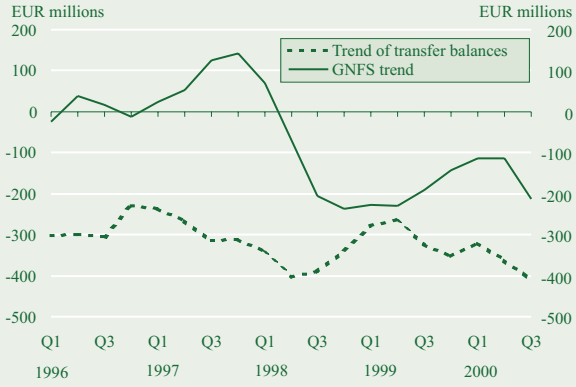
Corporate financing requirement increased, due to a rise in the sector's GDP-proportionate investment spending at current prices, in addition to the aforementioned effects. Factors to blame for the increase include changes in the price structure pushing up expenses[10] and a rise in inventories. Although corporate investment growth lost momentum in volume terms, investment spending at current prices increased as a proportion of GDP.[11] During the remainder of the year the income relations between the central budget and companies may change in a way that could improve corporate sector disposable income. This may enable companies to control or even curb the level of their financing requirement, even along with their stronger investment activity over the near term.

In sum, the increase in the external financing requirement in 2000 Q3 was due to an approximately 2.8% rise in the private-sector borrowing requirement, as the improvement in households' financing capacity took place with stronger growth in companies' borrowing requirement. The approximately 1% improvement in the fiscal position mitigated this adverse impact on the external balance, but even the relatively tight fiscal stance failed to offset the effect of the unfavourable foreign market prices.

2 Current account and its financing

In 2000 Q3, the deficit on the current account of the balance of payments amounted to EUR 126 million *(see Table V-2)*. Although the strongly improving trend in the balance of services remained unbroken, the balance of goods turned down significantly, feeding through to the trend of total real-economy transactions. As far as the balance of transfers is concerned, steady growth in net outflows of income generated on non-debt investments exerted downward pressure on the trend *(see Chart V-2)*.

Chart V-2 **Real-economy transactions and the trend of the transfer balance**



[10] While the investment price index was lower than the GDP deflator in 1999, it was higher in 2000 Q3.

[11] From 15% in 1999 Q3 to 16%.

Although combined data on the first three quarters reflect a better position on the current account of the balance of payments than last year, shifts in the trend seem to foreshadow a downturn during the final quarter.

Chart V-3 clearly shows that the seasonally adjusted deficit on the current account of the balance of payments in the third quarter was unfavourable, a fact reflected in the rapid deterioration in the trend. It should be pointed out nevertheless, that the interpretation of end-of-period data requires a certain amount of caution. It is clear from the chart that the current account trend already worsened during the second quarter, though the previous issue reported an improving trend. Developments are primarily influenced by deterioration in the balance of trade – as a delayed effect of the trend which has already surfaced in the customs statistics – and the rise in income transfers generated on non-debt investments.

The improving trend in the balance of services and debt-type income transfers, as well as the flat trend in current unrequited transfers were not sufficient to offset the substantial downturn in the trend of the above factors.

The financing of the third-quarter deficit on the current account of the balance of payments was characterised by waning non-debt-generating net capital inflows (EUR 92 million), while debt-type investments exhibited net capital outflows *(see Chart V-4 and Table V-3)*.

In respect of non-debt-generating items, net equity purchases and the acquisition of ownership stakes within foreign direct investment amounted to EUR 320 million as a result of an inflow of EUR 519 million and an outflow of EUR 199 million. This greatly exceeded the deficit on current account in its own right. The nearly EUR 200 million direct investment by Hungarian resident businesses abroad in the course of one quarter was outstanding, but it can be traced back to one single exceptionally large transaction. It should be also noted that prior to this transaction, but still during the third quarter, there was additional capital raised of nearly the same size by the foreign owner of the Hungarian firm which then made the major investment. Thus, the transactions mentioned did not significantly influence net foreign direct investment flows. Net portfolio equity purchases abroad comprised an outflow (EUR 229 million), slightly smaller than that in the previous quarter (EUR 258 million). This involved uninterruptedly strong net equity purchases abroad by Hungarian residents, at nearly EUR 60 million, while the value of foreign residents' third-quarter sales of Hungarian equities amounted to EUR 170 million in net terms.

A look at the distribution of securities transactions[12] highlights a change relative to the second quarter. In 2000 Q3, purely financial enterprises constituted the largest domestic equity purchasers (above all, insurance companies and pension funds), while in the previous quarter non-financial and financial businesses bought Hungarian equities from foreign investors in an equal share. What is assumed to have taken place during the previous

[12] Comparison is made difficult by the fact that in respect of equities only securities traded on the stock exchange are recorded in the securities statistics, whereas the balance of payments also includes the turnover in OTC markets. Furthermore, the statistics on securities do not differentiate between transactions in terms of direct investment and portfolio investment.

***Chart V-3* The current account**

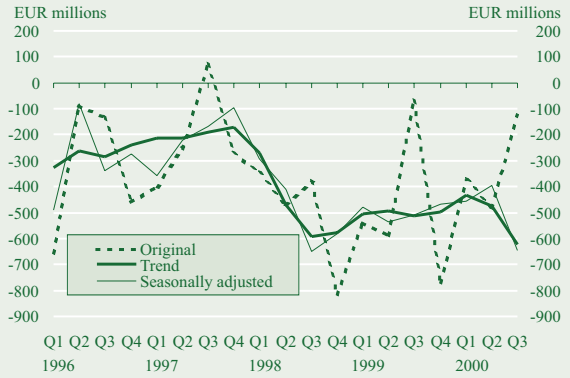


***Chart V-4* Current-account deficit and non-debt generating financing**

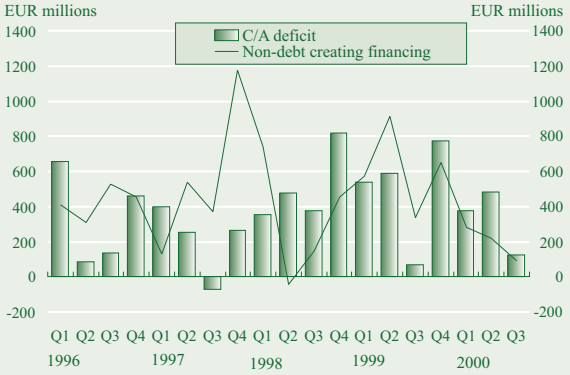


***Table V-3* Financing the current account**

EUR millions

	1999 Q3	2000 Q3	Change	1999 Q1–Q3	2000 Q1–Q3	Change
(1) Current account deficit	**70**	**126**	**56**	**1,197**	**986**	**–211**
(2) Total financing	**–117**	**–21**	**96**	**1,534**	**809**	**–725**
– non-debt (=2b.1+2c.1)	**338**	**92**	**–246**	**1,822**	**592**	**–1229**
– debt (=2a+2b.2+2c.2)	**–455**	**–113**	**342**	**–288**	**216**	**504**
(2a) NBH and the government (=2a.1+2a.2)	–901	–498	403	–623	–623	0
(2a.1) Debt transactions	–196	249	445	649	247	–403
– o/w government securities	51	237	186	189	819	630
(2a.2) International reserves	–705	–747	–42	–1,273	–870	403
(2b) Private sector (=2b.1+2b.2)	437	101	–336	1,265	150	–1,115
(2b.1) Equity transactions	96	–229	–324	902	–438	–1,340
– Credit institutions	10	–12	–22	5	60	55
– Corporate sectors	85	–216	–302	897	–498	–1,395
(2b.2) Debt transactions	341	329	–12	363	588	225
– Credit institutions	141	476	335	–18	1,120	1,138
– Corporate sectors	200	–147	–347	381	–532	–914
(2c) Direct investment (=2c.1+2c.2)	347	376	30	893	1,282	389
(2c.1) Equity capital	242	320	78	920	1,030	110
– in Hungary	279	519	240	1,053	1,271	219
– Abroad	–37	–199	–162	–133	–241	–109
(2c.2) Intercompany loans	104	56	–48	–27	252	279
– in Hungary	109	45	–63	–13	253	265
– Abroad	–4	11	15	–15	–1	14
(3) Capital account	**95**	**93**	**–2**	**–38**	**177**	**215**
NEO (=1–2–3)	**92**	**54**	**–38**	**–299**	**0**	**299**

* Portfolio and other investments.

quarter is that Hungarian subsidiaries of foreign multinational companies bought their own shares on a large scale, which resulted in a high rate of net equity purchases by non-financial enterprises.

The significance of such transactions declined during the third quarter, and low market prices also attracted some Hungarian financial corporate buyers. The factors to blame for the withdrawal of foreign residents and the plunge in the Hungarian share index include, apart from global stock-market uncertainty, government interference with the pricing of certain leading firms whose shares are quoted on the stock exchange, weak or disappointing corporate performance in the second quarter and the explicit economic and legal difficulties facing a number of firms.

A noteworthy development in respect of *debt*-type financing was an upsurge in government securities sales to non-residents (EUR 237 million), as the foreign exchange borrowing transactions of the National Bank and the government (public sector) cancelled one another out. Although the third quarter (end-July and mid-August) saw a repayment of medium-term loans totalling EUR 460 million, while there were no new loans undertaken, this outflow was roughly offset by short-term portfolio financing and other investments.

The approximately EUR 750 million transactions-based increase in international reserves was derived broadly as the difference between conversion-type foreign exchange purchases of EUR 815 million and net interest charges of EUR 70 million paid by the Bank.

Following a downward trend during the second quarter, private sector borrowing picked up during the third quarter. Credit institutions used foreign exchange funds primarily to step up the amount of financing loans to the corporate sector. Thus, there was only a minor change in their on-balance-sheet foreign exchange positions.

Decline in forward contracts and the long forward-exchange position itself led to relatively faster quarterly growth in the banking sector's forint position. The corporate sector used the foreign exchange loans extended by the domestic banking sector predominantly to boost its short-term trade credit abroad, which was probably needed in order to facilitate the rapid settlement of the larger import account abroad. In respect of intercompany loans there was a net capital inflow of EUR 56 million during the quarter.

This was definitely below average, especially in view of the fact that the servicing of intercompany loans related to Hungarian businesses abroad exceeded new loan extension by EUR 11 million, reducing by that amount the net inflow recorded in the line of intercompany loans extended to the Hungarian subsidiaries.

The capital account, comprising transactions in unrequited capital transfers, non-produced and non-financial assets, showed a surplus of EUR 93 million in the third quarter.

3 International investment position

There was a minor shift in the net international investment position, bringing down net foreign liabilities from EUR 30.9 billion at end-June to EUR 30.5 billion at end-September *(see Table V-4)*. Net foreign liabilities in the form of non-debt elements continued to decrease. Although the stock of foreign direct investment rose at a rate in excess of Hungarian outward FDI, this was overcompensated by the net outflow via the portfolio equity investment channel. In comparison with EUR 19.2 billion in the previous quarter, the non-debt elements of third-quarter net foreign liabilities stood at EUR 19 billion. There was also a drop (from EUR 11.7 billion to EUR 11.4 billion) in debt-type net foreign liabilities *(see Chart V-5)*. Net foreign debt calculated exclusive of foreigners' forint-denominated government security holdings and intercompany loans fell to EUR 5.9 billion by the end of the quarter. The rise in international reserves was particularly sharp, up from EUR 11 billion in the second quarter to EUR 12 billion at the end of the third quarter.

Non-debt foreign assets continued to rise in 2000 Q3, with Hungarian residents' foreign direct investments excluding intercompany loans rising to EUR 1.8 billion and portfolio equity investment to over EUR 200 million. The stock of FDI in Hungary excluding intercompany loans rose from EUR 17 billion to 17.4 billion, while portfolio equity holdings fell from EUR 3.8 billion to 3.6 billion. As movements in the stock market index appeared to be less rhapsodic over the period under review than in the second quarter, (stuck within the 7,923–8,654 range, showing relatively moderate daily shifts and nearly identical values at the two end-points of the period) changes in prices account for only a relatively small portion of the decline in holdings, and it sounds more probable that the figures reflect the effect of net transactions (of minus EUR 170 million).

The *debt*-type net investment position also declined, as a result of slower growth in foreign liabilities than in foreign assets (above all, the international reserves). On both the liabilities and assets sides the sharpest rise took place in the category of other investments, with the former reflected in an increase in banking-sector liabilities and the latter in the rise of corporate-sector foreign deposits (as already noted in the section on financing). A significant part of the increases came from revaluation, due to cross-exchange-rate changes (in respect of gross and net foreign debt this amounted to nearly EUR 1 billion and EUR 300 million, respectively).

Total debt-type investments (excluding forint-denominated government securities and intercompany loans) constitute net foreign-exchange-denominated foreign debt. As a result of the jump in the National Bank's foreign assets (above all, the international reserves), this debt dropped from EUR 6.5 billion in 2000 Q2 to EUR 5.9 billion in the third quarter. As a result of a slight fall in net government debt, claims on foreign residents at the end of the third quarter for the public sector as a whole exceeded liabilities. The fact that the high rate of banking-sector external borrowing could not be offset by companies' foreign debt servicing exerted upward pressure on net private sector foreign debt *(see Table V-5)*. Gross foreign debt rose to EUR 26.8 billion, shared in

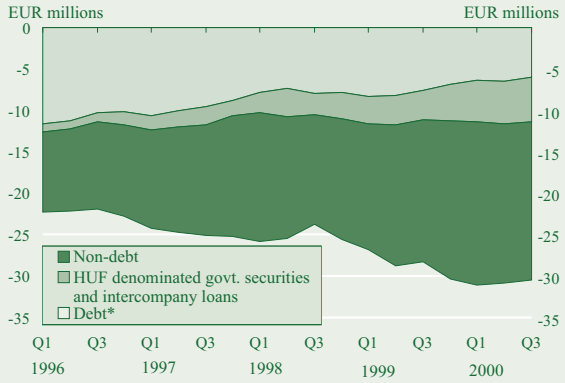
Table V-4 **International investment position**

EUR millions

	1999	2000	
	Dec.	June	Sep.
Net international investment position (=1–2)	**–30.4**	**–30.9**	**–30.5**
– non-debt(=1a.1+1b.1–2a.1–2b.1)	**–19.1**	**–19.2**	**–19.0**
– debt (=1a.2+1b.2+1c+1d–2a.2–2b.2–2c)	**–11.3**	**–11.7**	**–11.4**
(1)Foreign assets (=1a+..+1d)	**19.1**	**20.7**	**23.1**
(1a) Direct investment abroad	1.6	1.7	2.0
(1a.1) Equity capital	1.4	1.5	1.8
(1a.2) Other capital (intercompany loans)	0.2	0.3	0.2
(1b) Portfolio investment	1.2	1.7	2.1
(1b.1) Equity securities	0.1	0.1	0.2
(1b.2) Debt securities	1.2	1.6	1.9
(1c) Other investment	5.6	6.2	6.9
(1d) International reserves	10.8	11.0	12.0
(2) Foreign liabilities (=2a+..+2c)	**49.5**	**51.6**	**53.5**
(2a) Direct investment in Hungary	19.1	20.2	20.7
(2a.1) Equity capital	16.2	17.0	17.4
(2a.2) Other capital (intercompany loans)	2.9	3.2	3.3
(2b) Portfolio investment	16.9	16.2	16.4
(2b.1) Equity securities	4.3	3.8	3.6
(2b.2) Debt securities	12.6	12.4	12.8
(2c) Other liabilities	13.5	15.2	16.4
MEMORANDUM ITEMS			
(M) Government securities held by foreigners	1.7	2.3	2.5
Gross foreign debt* (=2b.2+2c–M)	**24.4**	**25.3**	**26.8**
Net foreign debt* (=2b.2+2c–M–1b.2–1c–1d)	**6.9**	**6.5**	**5.9**

* Excluding non-Hungarian residents' holdings of government securities and intercompany loans.

Chart V-5 **Components of net international investment position**



* Excluding government securities held by foreigners and intercompany loans.

Table V-5 **Composition of foreign debt* by sectors**

	December 1999		June 2000		September 2000	
	EUR billions	%	EUR billions	%	EUR billions	%
(1) Gross foreign debt (=1a+1b)	**24.4**	**100.0**	**25.3**	**100.0**	**26.8**	**100.0**
(1a) NBH and government	13.4	54.9	13.1	51.7	13.6	50.9
NBH	9.8	40.0	9.2	36.2	9.9	36.8
Government	3.7	15.0	3.9	15.5	3.8	14.1
(1b) Private sector	11.0	45.1	12.2	48.3	13.1	49.1
Credit institutions	5.5	22.6	5.9	23.3	6.3	23.4
Corporate sector	5.5	22.4	6.3	25.0	6.9	25.7
(2) Net foreign debt (=2a+2b)	**6.9**	**100.0**	**6.5**	**100.0**	**5.9**	**100.0**
(2a) NBH and Government	1.3	19.3	0.7	10.1	–0.2	–3.7
NBH	–1.9	–26.8	–2.8	–43.6	–3.5	–59.7
Government	3.2	46.1	3.5	53.7	3.3	56.0
(2b) Private sector	5.6	80.7	5.8	89.9	6.2	103.7
Credit institutions	2.0	28.3	2.6	39.6	3.1	51.7
Corporate sector	3.6	52.4	3.3	50.3	3.1	52.0

* Excluding government securities held by foreigners and intercompany loans..

equal parts between the public and the private sector. The pronounced rise in this value relative to the previous quarter can be attributed to revaluation affecting other investments, due to cross exchange rate changes.

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